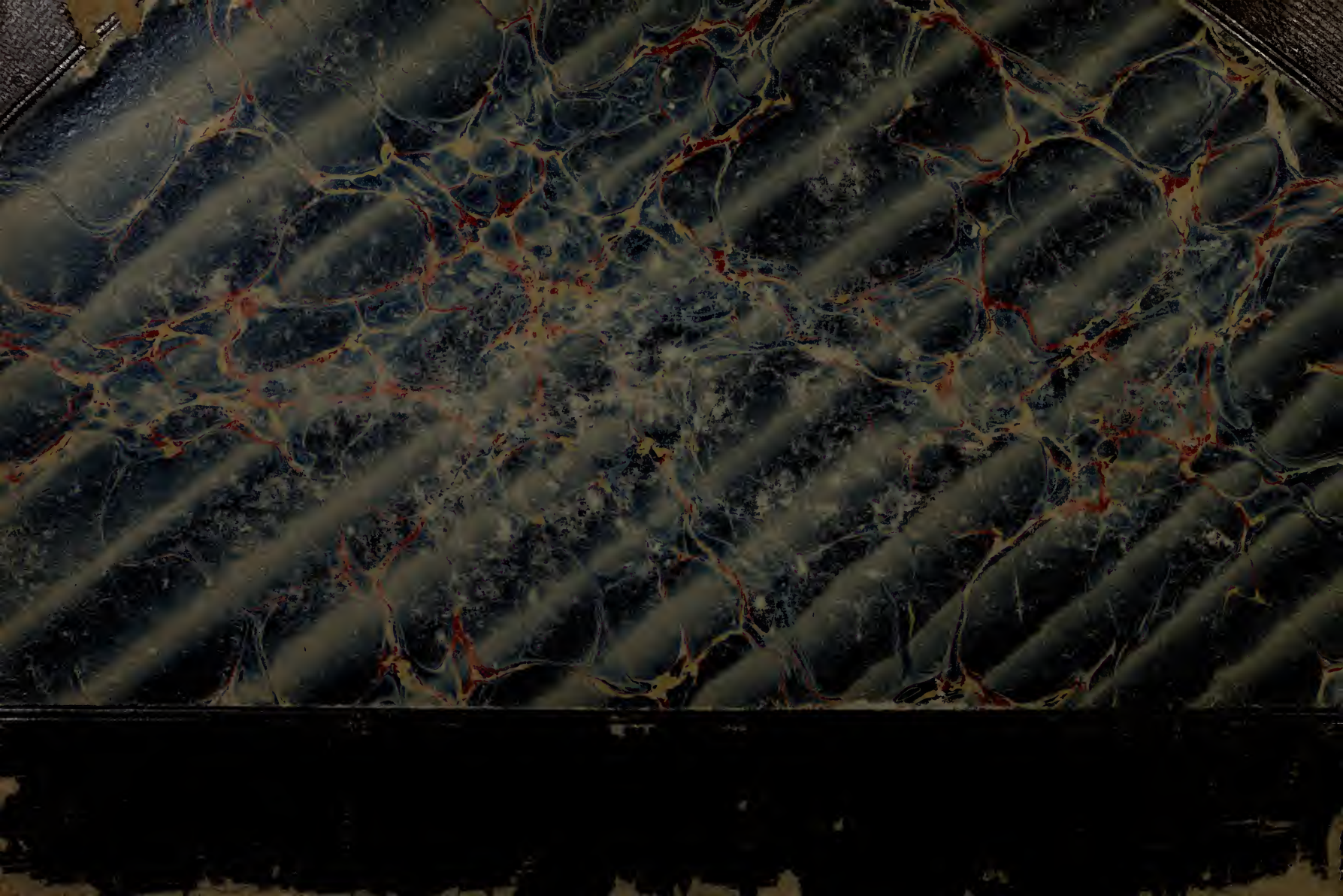

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Clinical Lecture.

PERI-UTERINE INFLAMMATION.

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Gentlemen:—I am fortunate in being able to bring before you this morning several cases that illustrate in a very typical manner the more common forms of peri-uterine inflammation, and which will furnish us with an opportunity for a brief sketch of some of its more salient points. This pathological condition may, for the sake of demonstration, be broadly divided into two classes, viz., acute and chronic. Most cases of peri-uterine inflammation begin acutely, and, after a time, develop into a condition which may be termed chronic, although that term is not a strictly correct one. Others begin insiduously, and are only discovered after they have existed for a period of months or years.

The pathological conditions to which I wish to direct your attention are those described in the books under the various names of peri- and para-metritis, both acute and chronic, and the various ferms of salpingitis. These different conditions, as viewed from a clinical standpoint, are often associated, and the result of a fairly definite sequence. Thus, we will have an inflammation of the mucosa of the uterus, of the tube mucosa, then of its peritoneal covering, the peritoneum adjoining, together with an exudation of coagulable lymph into the adjacent cellular tissue, and into the cavity of the pelvic peritoneum. The lymph in the meshes of the cellular tissue, which is at first fluid, coagulates and may finally be entirely absorbed, leaving only a slight contraction over the area involved. The peritoneal lymph coagulates into the firm, glue-like masses that you are all familiar with, becomes partly absorbed and partly organized into connective tissue containing many lymph spaces, and binds down by its contraction the uterus and appendages to the adjacent peritoneal surfaces. Occasionally, these cases begin as a true cellulitis with effusion into the sub-poritoneal connective tissue, which may be either absorbed, leaving finally only a contraction and thickening of the base of the broad ligament, or may go on to suppuration and the formation of pelvic abscess. Pelvic abscess also often results from the rupture of a pyo-salpynx between the layers of the broad ligament.

Sepsis is the great etiological factor in the causation of these inflammations. This sepsis may be produced either by the decomposition of blood-clots, or retained bits of the fœtal envelope after abortion or labor at full term, by a catarrhal or gonorrhœal endometritis, or by the introduction of septic material into the uterine cavity, or by instruments, or fingers, that are surgically unclean.

These are the most common causes of periuterine trouble.

Less frequently, the inflammation is tubercular, mycotic, or the sequela of one of the zymotic fevers, particularly scarlet fever.

"Catching cold" is held by many eminent authorities to be a prolific cause of peri-uterine trouble in women who have been previously healthy, but personally, I believe that this, in the absence of any previous pathological condition of the mucosa of the uterus or tubes, is a factor of very slight etiological value. It is unquestionably true that any ordinary catarrhal endometritis may extend to the tubes by direct continuity of structure, and this extension would be favored by cold and fatigue, or by any agent which might produce a temporary depression of vitality.

True cellulitis is practically always the result of a direct infection of the tissues through a wound of the cervix or vaginal

vault opening into the lymphatic spaces, and this usually occurs after delivery, more rarely after other mechanical injuries to the cervical tissues.

I will now bring before you a patient who presents a characteristic picture of acute peri-uterine inflammation following abortion; a woman who had previously had no pelvic trouble. She is twenty-four years of age; she has been married three years and has given birth to one child, a boy who is now eighteen months old, and whom she suckled for a year. After weaning him at the end of this time she menstruated regularly until six weeks ago when she missed a period. She dreaded pregnancy, but denies having done anything to bring on an abortion.

According to her statement, eight days ago, she began to suffer severe, cramp-like pains, and, at the same time, began to have a rather profuse, bloody discharge from the vagina. The cramp-like pains lasted for several days and then disappeared, after the expulsion of what she terms a "bit of flesh." The bloody discharge, however, continued, and during the last few days it has been attended with an offensive odor. Last night she felt chilly, then hot and feverish. The pains have returned and are now felt as a severe, constant ache all over the lower pelvic region; more intensely on the left side, and with occasional exacerbations of greater intensity. She also complains of severe pain on defecation or micturition and her temperature by the mouth is now $102\frac{8}{10}$.

On bi-manual examination, I find the uterus in a normal position, but enlarged, soft, tender and immovably fixed in the pelvis by a well-marked swelling on the left side, filling the space above the vaginal vault and extending back of the uterus into Douglas' pouch. On the right side there is a moderate amount of thickening about the appendages, but not so marked as that on the left, where the area of exudation is doughy, œdematous to the touch, exquisitely tender and hot. The vagina is bathed in an abundant reddish, fœted discharge. The cervical canal is dilated so as to easily admit the finger tip. While it is important to subject this woman to no unnecessary manipulation, it is absolutely requisite that we satisfy ourselves that the uterus is empty and that there is no further source of sepsis in its cavity. By reason of the dilatation of the cervical canal and the offensive odor from the vagina, I suspect the retention of some portion of the ovum, and with this dull curette I will now gently explore the entire cavity. The patient is very plucky and keeps quiet, otherwise we should have to use chloroform. This procedure is always best done at the patient's home, when practicable.

I now remove with the curette, as you see, these little masses of decomposing placental tissue and decidua, which seem to be all that have remained in the cavity of the uterus. It is now important to complete our work by irrigating the uterine cavity thoroughly with an antiseptic solution so as to wash away any debris that may remain there, and to render the cavity, as far as possible, aseptic. For this purpose, I will employ a bichloride solution of the strength of 1–4000, injecting it through this small glass catheter. You will notice that the cervix is freely enough dilated so that there can be no obstacle to the return of the water. This is a very important matter for us to know, for if we should inject any fluid into the cavity of the uterus, we might readily force a small amount of septic material, or some of the injected solution, into the tubes, and do serious damage to the patient. In private practice, it would be a much better plan to send this patient home, give her an anæsthetic and perform this operation of curetting and washing out the uterine cavity there. It is essentially important in this operation that the strictest antiseptic precautions be enjoined and carried out by the operator, as our object is to render the uterine cavity thoroughly aseptic, and so remove the materies morbi which gives rise to the fever, and which has already undoubtedly extended through the tubes, giving rise to a localized peritonitis. After the uterine cavity has been thoroughly cleansed in this way, the patient should be kept in bed and no further local examinations resorted to, A gentle, warm douche of a pint or two should be used twice daily for cleansing purposes. She should be kept quiet in bed for from two to three weeks until all the acute symptoms have completely subsided and the exudation markedly diminished. As long as any fever persists, an ice-bag should be kept over the suprapubic region. When the temperature drops to normal, you will find that hot poultices will afford her the most efficient relief from pain. At a later period, strong counter-irritation over the utero-ovarian region such as a blister, will give you the very best results, both in the way of relieving the pain and promoting the absorption of the peri-uterine exudation. The bowels are to be kept open by small doses of some saline laxative. For the relief of pain, I have found the most efficient agent to be

phenacetine in fifteen grain doses, in combination with from a half to one grain of codeine. Prolonged hot douches are not well borne until after the acute stage has passed. They are then useful in relieving pain and promoting the absorption of the exudate.

Our next patient illustrates a chronic condition of this same trouble. Her history at first was similar to that of the patient who has just left us. She now complains of pain low down over the sacrum, over the ovarian region, and pains of a bearing down character. She tells us that she has not been well since her second confinement.

Many of these patients come here with no history at all of any inflammatory trouble, and it often requires very careful questioning to determine when the initial inflammatory trouble began.

On bimanual examination I find the uterus displaced downward and backward, and but very slightly movable, being fixed by the adherent appendages and by direct adhesions to adjacent peritoneal surfaces. On either side there is an indurated, somewhat indefinite thickening extending down towards Douglas's pouch, where I can feel two fixed, exquisitely tender bodies, the prolapsed and adherent ovaries, the lateral masses being the thickened, convoluted and adherent tubes. There is considerable tenderness on pressure over the vaginal roof in the neighborhood of these masses, and any attempt to move the uterus gives rise to considerable pain. The patient tells me that she suffers an excessive amount of dispareunia. This difficulty is due to the fact that both ovaries are prolapsed, adherent and acutely intolerant of any mechanical pressure. The pain she complains of on defecation, when at all constipated, is due to the same cause, the hardened fecal masses as they pass down the rectum pressing against the adherent ovary on the left side, she also complains of a profuse, glairy and sticky vaginal discharge, and on examination with the speculum I find the os reddened and eroded. The cavity of the cervix is filled by a mass of thick, tenacious, brownish-yellow mucous, pathognomonic of a cervical endometritis.

These patients can often be greatly benefited by painting the vaginal vault with a strong solution of the tincture of iodine twice a week for months, and following this by the introduction of a tampon saturated with pure glycerine or boroglyceride. These tampons should be permitted to remain in position for twenty-four hours and then removed, the patient being instructed to wear a napkin in the meantime to prevent the profuse serous flow, caused by the glycerine, from soiling their linen. After the removal of the tampon in the morning, the patient should be directed to use for at least twenty minutes, a hot water vaginal douche at a temperature of 110° F. This can be done by means of a fountain syringe or syphon apparatus. These douches are best given with the patient lying on her back, with the hips elevated and supported by a hospital bedpan.

If the patient is so situated that she cannot come to your office frequently, she is to be told to use the hot douche every morning, and afterwards, to inject through a small glass syringe into the vaginal fornix, a dram of pure glycerine, or she may be directed to use glycerine vaginal suppositories. Tincture of iodine should be painted over the skin in the ovarian regions daily, unless it produces too much soreness. If the pain be severe, a series of blisters applied over the same region will be found very effective. Such treatment as this must be persisted in for months, and in a fair majority of cases, great relief, and often symptomatic cure will be the result.

The next patient is an unmarried girl nineteen years of age, who suffered from a moderate dysmenorrhœa. She comes to-day complaining of trouble that commenced with a slight chilliness, fever, pain and tenderness over the region of the appendages, following the use of the sound by a physician who, she says, took it from his pocket to introduce it, and again returned it after simply wiping it with a dry towel. She now feels weak and miserable, though still attending to her duties as housemaid. Bi-manual examination is different in this case, because of the tense abdominal walls and the tenderness of the parts. The uterus, however, we find to be sharply anteflexed and fairly movable, though any attempt at motion gives rise to pain. Laterally, we find great tenderness and some thickening of the uterine appendages. Such a pathological condition as this is often found associated with slight septic infection from careless gynecological manipulation, and affords us, as in this case, a striking illustration of the necessity for more careful asepsis in ordinary gynecological examinations. It may be safely said that if we can be sure that the vagina, cervix, instruments and fingers are thoroughly aseptic, we will very rarely produce such a pathological condition as is present here.

The treatment of this patient is best in

bed, the icebag over the supra-pubic region, and aconite or pulsatilla internally, while there is any fever present. Under the use of these remedies, the pain will probably soon disappear and the slight thickening of the appendages clear up together. The more marked examples of this condition pass into the chronic form, as illustrated in the case of our second patient, and then require the same course of treatment.

The next patient furnishes us with the history of a but too common affection in women, and clearly illustrates the deplorable effects of gonorrhœal affection. She is a woman twenty years of age and was married eleven weeks ago. Her husband, who comes with her to the clinic to-day, acknowledges that he had a gleety discharge at the time of his marriage. The wife rapidly developed an acute, gonorrhœal vaginitis, which was treated by her physician, and about the time he thought he had brought the disease under control, the woman began to complain of a sense of pain over the lower part of her abdomen. She had a slight fever, and some chilly sensations, and on local examination a condition was found for which she was referred to this clinic for treatment.

On bi-manual examination I find that the tubes, which I happen to know were in a perfectly normal condition at the time of her marriage, are now very tender, enlarged, and, as distinctly mapped out by the finger tips, stand like little sausages on either side of the uterus. They are free from adhesions and are perfectly movable, typical examples of a pure, acute salpyugitis.

If we treat this patient by rest, blisters, etc., her pain will become less, and she will be symptomatically fairly well, but those distended tubes will be still there, and after some slight exertion, there will be a leakage from their fimbriated extremities, which will result in a return of the pain and fever, to again subside after a time. She will develop a series of such recurrent attacks, and we will then find that the tubes, which at first were movable, are becoming more and more bound down by the effused lymph, until finally there will be only a firmly fixed, shapeless, tender mass to the sides and back of the uterus. All cases do not fortunately run so serious a course, but for many this picture is not overdrawn. I have seen three such cases during the past few months, all of which followed the same course. The ordinary treatment benefits them only temporarily, but does not cure the disease, or prevent the recurrences, which, at any time, may develop into a general peritonitis and kill your patient. In such instances as this laparotomy is the proper therapeutic course to follow, delay is dangerous and only renders the removal of the diseased appendages more difficult from the formation of increasing adhesions. It may be safely stated that if a patient comes to you with a history of oft-recurring attacks of localized pelvic inflammation, and, on examination, you find the tubes markedly enlarged, tender, prolapsed, and more or less adherent, you are fully justified in advising their prompt removal.

Apropos of this case, I may here speak of the general laxity and indifference with which many physicians regard the presence of a slight, gleety discharge in a man who contemplates marriage. He is usually told by his physician that there is no danger of infection of his wife. He accordingly marries, and the woman who had been previously in perfect health begins to suffer from increasing pain at her menstrual periods. She gives birth to a child, and after the birth of that child, even though the strictest asepsis be maintained at its delivery, she develops an attack of acute salpingitis, and is ever afterwards sterile. Or, perhaps, she does not conceive at all, but complains of increasing peri-uterine pain until finally an examination reveals a thickened and tender tube or tubes. She has recurrent attacks of acute localized peritonitis and finally comes under the knife of the surgeon.

These cases are not in any way exaggerated instances of this condition, and they go to prove that gonorrhœal infection persists, in many cases of gleet, with at least enough virulence to render the individual a dangerous husband. For this reason no man with gleet should be allowed to marry while such a pathological condition persists.

The more acute forms of gonorrhœal vaginitis are seen in young women in whom the vagina has not been toughened by repeated coitus, astringent injections, etc. In prostitutes and older women of unclean habits, gonorrhœa may, and often does exist, without any appreciable vaginitis, the vaginal mucosa being so toughened and resistant to the action of irritants that the gonococcus can make no marked impression. These women on superficial examination, may appear to be healthy and yet, because of the presence of the gonorrhœal virus in the secretion of the cervix or endometrium, they are perfectly capable of transmitting the disease to a healthy individual. This is a clinical fact that is often over-looked, and yet is a matter of very great practical im-

portance. In any of these forms, the disease, of course, may at any time pass up the endometrium and into the tubes.

Any of the zymotic fevers may cause tubal inflammation, though authentic cases are rare. One that I now recall was in the case of a clergyman's wife who came to me for advice. She had been married nearly a year, and, on examination, I found a thick, fleshy hymen, through which I could not pass the tip of my little finger. There was also a very marked vaginismus present. The hymen was incised under chloroform, the vaginal orifice dilated, and vaginal examination revealed a large, sausage-shaped tumor on either side of the uterus. On questioning the patient afterwards, I learned that she had had a severe attack of scarlatina when 16 years of age, and since that time had suffered from scanty, painful and irregular menstruation. She was treated for a period of 18 months in the manner I have previously described and felt very much improved as a result. She subsequently became pregnant, but about the sixth month of pregnancy developed an excessive degree of hydramnion and miscarried.

The last patient I show you to-day exhibits a pathological condition known as chronic pelvic cellulitis. Chronic pelvic cellulitis is much less frequent than was formerly supposed, and occurs after injuries of the cervix or vaginal vault during labor or abortion, or after operations involving some traumatism of these parts. It often begins with a chill, a marked rise of temperature, and severe local pains. The vaginal vault on the affected side is depressed, boggy and tender. The pelvis is filled with a mass that often extends into Douglas' pouch, and the uterus is fixed and immovable. The infiltrated tissues are at first doughy, but soon acquire a characteristic woody hardness. This exudation is usually absorbed, leaving behind only thickened, contracted bands along the base of the broad ligament, such as we find in this case, or it may break down and form a pelvic abscess.

The treatment of this condition, while acute, is similar to that of the first patient I presented to you, unless it should break (suppurate) when an incision and drainage through the vagina or abdominal wall would be necessary, as soon as the presence of pus could be detected.

In the treatment of all these cases you must not forget the importance of maintaining the general nutrition of the patient at as high a plane as possible. Any systemic dyscrasia must be looked after and corrected. Good food, general tonics, fresh air, cheerful surroundings, oxygen and iron are the most useful therapeutic measures at our command. Local complicating lesions must be attended to, as, for instance, an hyperplastic endometritis, with severe metrorrhagia. Here, careful dilatation and curetting, *under strict antiseptic precautions*, will often help in a very remarkable manner in improving the patient's condition.

Another point I wish to impress upon you in this connection is: Do not submit patient's who have peri-uterine trouble to frequent and unnecessary manipulations. After you have once made your diagnosis, do not examine your patient every time you treat her, but only so often as it is necessary to ascertain progress in the case. Warn these patients against violent or frequent sexual intercourse, against heavy lifting and the use of tight clothing, or corsets. Do not be too anxious to perform laparotomy, for, though it may not be so brilliant an undertaking to make use of a tedious course of treatment in these cases, it is in the long run more satisfactory to them and will reflect much more credit upon you. If the patient does not improve after a time, if she continues to suffer very severe pain or has recurrent attacks of local peritonitis, then, you can always advise the radical operation. It has been my experience that many patients who suffer pain from firmly adherent appendages, do not get the relief that you would expect from their removal. This is often due to the fact that the raw surfaces left after peeling the tubes loose from their attachments, furnish tempting opportunities for stray intestinal coils to enter into undesirable alliances; connections which are difficult to prevent and to remedy.

Some of the more important lesions taught us by the study of periuterine inflammations are; that we should always use most careful antisepsis in dealing with the female pelvic organs, that we may not cause harm instead of good.

In incomplete abortion, to remove the remnants at once.

Do not let your male patients marry while they still have an "innocent gleet."

Be patient and persistent in treating obscure tubal troubles, and, as a rule, do not be in a hurry to advise or perform laparotomy.

FOR WARTS AND CORNS.

An excellent remedy for warts and corns, is a solution of salicylic acid in flexible collodion. A saturated solution is best.

GENU VALGUM—HYDROCELE—FRACTURED RIB—ISCHIO-RECTAL ABSCESS.

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[AT PHILADELPHIA HOSPITAL.]

Here is a little boy I wish to bring before you, and on whom I hope soon to operate. The child has knock-knees or genu valgum, and I would like to tell you what that is, and just how it it is formed and what is the operative procedure to remove the deformity.

This child has a puny appearance, and on looking at its face, you get a clue to the cause of the condition. Open your mouth. He cannot open his mouth very widely, and on examining we find that there are cicatrices which prevent him from doing so. On looking at them carefully you will find that they have the typical appearance of scars resulting from mucous patches. He has inherited syphilis. He had Hutchinson's teeth, but they were removed. See these cicatrices, with a perfectly white base and a certain amount of fibrous tissue all around. You find that he has also had a form of bone trouble—osteo-myelitis—common in children, especially those who have inherited either the syphilitic or tuberculous diathesis.

The child has also genu valgum. What is the pathology and how does it come to pass? You all know how bones grow. You know they grow in their continuity and in their width; that at the end of the bones is an epiphysal cartilage, which is plentifully supplied with blood, and that the cells in it are in an active state of proliferation. This cartilage exists at each end of the bone and its cells grow by a phenomenon called karyokinesis, that is a splittting up of the nuclei and cell into two. These cells accumulate on the surface of the cartilage, and that is how the bone grows in its length. In its width it grows by means of the periosteum and endosteum.

What we wish to see now, is the part which this epiphysal cartilage plays in producing genu valgum. In a person who is perfectly healthy, whose cells develop uniformly and equally, the cells grow evenly to the right as the left, forward as backward; hence, as a result, the limit remains straight. If, on the contrary, the patient suffer from some diathesis, some impurity of the blood, or some disease of the cells, (which originally may have been very few,) it is possible and it does occur that some cells are not healthy, and not able to develop new ones as they ought to be. Here on the underside they develop as they should, but, to the outer side, they do not develop so regularly; less of them are produced in a given length of time than are produced on the inner side and, as a result, there will be an accumulation of cells here and a thin layer outside, just as if a wedge were put between the bone and epiphysal cartilage, pushing the limb out. When we have the condition known as bow legs, it is the opposite to that which has taken place, and instead of thickening taking place to the inner side, it is outside. Therefore remember that this is a fault of nutrition, of develpment of the epiphysal cartilage and, as a result, this deformity takes place. The treatment is entirely an orthopædic one; the surgeon directs his attention to remedy the deformity. He ought to bear in mind the diathesis which predisposes the affection. In this case we recognize the syphilitic diathesis and we ought to proceed cautiously, and give the child the benefit of all that we know. Bearing this in mind we proceed to the remedial measure, which consists simply in making the limb straight, if possible. There is only one way to do this, and that is by breaking the femur above the condyles, treating the case subsequently as a fracture of the lower third of the femur. How are we going to reach this end? We know how fractures are produced by a fall, by an extra amount of force on a particular spot. Therefore, instruments have been devised whereby the limb is held fast while the end of it lifted up, thus producing fracture. This operation is osteoclasia, the instrument the osteoclast. That operation was in vogue before the triumph of antiseptic surgery, for by it the surgeon had no external wound, but such great force has to be applied in order to obtain the result, that the tissues necessarily were much contused and the nerve vessels run great risk of being injured, so that this operation is gradually sinking into disuse, owing to the gradual advance of antiseptic means of operating. The operation now resorted to is simply to cut upon the bone, denude it of its periosterim, and, using chisel and hammer, remove a wedge-shaped piece of bone, or cut partly through, and, with a slight effort, break it. You have practically obtained the same result as you would have obtained from the osteoclast, without the bruising of the tissues. Then close the wound with a dressing that excludes the atmosphere; use Plaster of Paris dressing

or ordinary fracture splint, and in a month or two the limb is healed and straight. Finally, the patient, especially if both limbs are operated upon, is taller than before the operation, because a straight line is the shortest distance between two points. The modern treatment, therefore, is osteotomy; the case being transformed into an aseptic compound fracture—which to-day seldom implies more risk in prognosis than a simple fracture.

Hydrocele.

No case in surgery, however insignificant, is devoid of points from which a great deal of knowledge may be gathered. If we only knew everything about the very simplest case, we would be much further advanced than we now are. You know how to diagnose a case, and think it apparently simple, but push your research to the bottom facts and you will certainly be puzzled.

So here is a case of hydrocele in a very healthy man, a sailor. A bag fell upon him, causing a traumatism over the testicle and, as a result, there is a swelling. A swelling in that region can be one of only two conditions, either an inflammation of the gland from direct injury, called orchitis, or an inflammation of the serous membrane covering the gland, causing an effusion of serum within that closed sac which was originally a portion of the peritoneum called the tunica vaginalis. The serum gathering within this sack, forms a tumor (hydrocele) over the testicle, not a tumor of the testicle itself.

Now let us see exactly the anatomy of the the parts. The spermatic cord running up with its vein and artery; the peritoneum coming down and being reflected over the surface of the testicle exactly as the serous membrane is reflected over the ribs and the lung; above the testicle the layers becoming adherent and forming a single layer from the top of the testicle up to the internal abdominal ring, over the testicle a capacity for containing water. The meaning is conveyed to you by the idea of an empty leather bag. So here it is closed, but with a capacity for holding fluid. If inflammation be excited about the sac, it will cause fluid to be poured into its cavity, which we then call a hydrocele. When this fluid is limited to the cavity extending from the bottom to the top of the testicle we simply call it a hydrocele, a fluid tumor in the tunica vaginalis testis. But there are cases where the adhesions between the inner and outer layers of peritoneum over the cord are destroyed and exudation of serum between them causes a tumor extending to the top of the cord, near the external inguinal ring. In these cases we have a tumor, as we see in the man before us, extending from the bottom of the testicle to the external ring—a hydrocele of the cord.

The most frequent cause of hydroceles, both of the testis and cord, is a chronic inflammation directly or indirectly coming from old gonorrhœa. Remember that in this case, as in every other case of irritation of any part of the body, the primary agent is an irritant which causes congestion of the blood vessels, just as when you put a blister on the surface of the skin and cause the serum to come out on the surface and form a bleb; so here, on irritation, the serum comes out and forms a tumor. The irritation need not necessarily be gonorrhœal, but may be a traumatism, which produces nearly the same thing; it produces a blister such as you get from using the oar. So, also, a traumatism to the tunica vaginalis testes will produce a similar blister.

How do I diagnose a hydrocele of the tunica vaginalis testes and how do I distinguish it from a hydrocele of the cord?

According to our theory as to the respective locations of hydroceles of the tunic of the testes and cord, if this involved only the space between the upper and lower borders of the testicle we would have hydrocele of the tunica vaginalis testes only, but as the tumor extends to the external ring, we have hydrocele of the cord also.

Again, on making gentle pressure above between the finger and thumb of one hand, and placing the other hand on the lower part of the tumor, the impulse or sensation of fluctuation is distinctly felt below, showing the presence of fluid and showing also that the cavities communicate.

The diagnosis having been made, we will wash the surface of the testicle and puncture the hydrocele.

Remember that any discharge which we may have in surgery derives its color from the blood; therefore, in traumatic hydrocele the color of the fluid is deeper, the more recent the traumatism. If this hydrocele had been punctured immediately after the traumatism it would have been much more like blood. The direct result of the traumatism here was an effusion of blood; clots were formed, and the serum from the blood is what we have just drained off. As I push the canula lower down, we notice some blood yet coming out of the parts.

What will be the result of our operation? In a case of hydrocele, or dropsy of any

serous membrane, the result to be aimed at is to prevent a return of the effusion, which once having occurred, is prone to recur. To accomplish this, we will endeavor to excite an inflammation in the sac, which shall cause its layers to adhere throughout and thus obliterate the cavity. In hydroceles due to gonorrhœa, different measures have been adopted to effect a radical cure; irritating substances, such as tincture of iodine or carbolic acid, have been injected, or the sac has been scraped. Here, the mere evacuation of the fluid will suffice to obtain this result.

FRACTURED RIB.

The next case is one of fractured rib, which, though a trivial accident, may be the source of a great deal of trouble, and it is in view of the possible complications that we must know how to treat such a case.

Fractures of the ribs are produced by direct traumatism, that is, the patient has received a direct blow; has fallen and struck himself; has been caught by falling masses of any kind, or crushed between cars, etc. It is always a local injury.

The first symptom, which becomes evident to the patient, is a stitch in his side as he takes a deep breath. You can readily see that the rib being fractured and its continuity altered, as the thorax expands one end goes one way and the other another way and it is the friction of these ragged ends of bone that causes the stitch in the side and leads the patient to call for the doctor.

As I press with my thumbs, one over one broken end and one over the other, I felt a grating sensation. This sound, taking place over the lung gives a resonance that is quite peculiar to these fractures.

Let us see what might take place if the patient were not treated, for it is only by knowing this that we can fully appreciate the prognosis in the case, not only when he is not treated at all, but when he is improperly treated. If left alone, and the patient be not warned of the danger, the broken ends of this rib will keep on scratching the tissues, and it would suffice, if the man had any diathesis or cachexia (diathesis meaning an inherited condition and by cachexia meaning an acquired vice of the system due to some disease that he himself had contracted) to set up an irritation; this becoming the spot of least resistance, would be the seat for the manifestation of any vice of the system, such as tuberculosis or syphilis. Not only that, but taking his system to be in a normal condition, these ribs rubbing together would cause irritation of the subjacent pleura—pleurisy—which might soon become purulent and almost destroy the usefulness of the lung. So you see we have a chain of events, the links of which are the result of only a comparatively slight injury. Therefore, you must insist on the proper treatment, which is simply keeping the fractured ends of the ribs in the apposition. You must think of nothing else; put them in splints if possible. To do that, the only way is to bind the thorax and change the form of respiration. You know there are three forms of respiration; the abdominal form, seen in children, where the inspiration is affected by the descent of the diaphragm; the inferior costal type, seen in men, where the inspiratory movements effect chiefly the lower part of the chest wall; and the superior costal type, seen in women, where the movements are chiefly of the upper part of the chest wall. Here we really put corsets on the man; we prevent the chest from expanding by strips of plaster placed about the chest. He will then breathe by depressing the diaphragm. Now there are two ways of putting on these plaster strips. You may apply them only to the affected side, but I take it to be safer to bind the whole chest. Having done this, the man already feels relieved, as the crepitus has ceased.

ISCHIO-RECTAL ABSCESS.

Next I have to show you a case of ischio-rectal abscess. The case has been operated on and is on a fair way to recovery. The abscess has been opened and a large amount of pus evacuated; the case remains, however, very interesting, unassumed as it is one of those instances wherein you see the great simplicity that surgery has at present taken; how affections that were arranged under many different heads, are now classed under one head. If you understand one, you understand all; only the location is different.

This is called an ischio-rectal abscess, because it pointed in the region between the margin of the anus and the ischium. It was a large abscess that did not cause much elevation of temperature and no pain except near the end of its course, when it approached the skin. These have been called cold abscesses, and are found in different parts of the body; at the apex of Scarpa's triangle, called psoas abscess; above Poupart's ligament, called iliac abscess; between the anus and ischium, ischio-rectal abscesses. All these are simply cases of bone tuberculosis. The tubercle bacilli develops somewhere in the back, around or in a bone,

generally starting about a cartilage. It invades the cartilage, destroys it, and then destroys a portion of the bone. There is an accumulation of pus, which is not taken up by the economy, on which account there is no fever. The reason it is not taken up is that the tubercle bacilis grows very slowly; even in the labaratory it takes two or three weeks or a month before we have a growth. So, in the human body, with but few exceptions, it grows slowly. In consumption the patients last for years, so in hip joint disease, when this bacilis grows in the neighborhood of a cartilage. It grows very slowly and there is a formation of a layer of fibrous tissue about it, the so-called pyogenic membrane, an expression of the old patholigists who thought this membrane produced the pus. The fibrous tissue is merely the result of the chronic inflammation and isolates the abscess from the rest of the body; thus it is that the pus is not taken into the general economy and there is no fever from it; it is locked up. Therefore remember why we call it a cold abscess—because there is no fever with it.

Now imagine a bone to become carious (ulcerated), say about the first lumbar vertebra an abscess forms gradually and becoming larger and larger, the mere force of gravitation causes it to pass in the direction of least resistance. If the abscess exists about the region of the psoas muscle, it will dissect the sheath of muscle and follow it to its insertion at Scarpa's triangle and you say the patient has a psoas abscess, which is only the manifestation of a tuberculosis around a vertebra in the lumbar region. On the other hand, you have an abscess which opens above Poupart's ligament, which presents the same greenish pus found in other cold abscesses. This could only start around or at the margin of the pelvis, and burrowing along the iliac muscle, lifts the peritoneum, and opens at Poupart's ligament an iliac abscess. In the case before us, the abscess which was of the same kind, took neither of the courses above described, but opened between the margin of the anus and the ischium. We ask ourselves whence is this pus. It is from a tuberculous process going on at the inner side of the sacrum, exactly where, I cannot tell.

The abscess points wherever it finds the least resistance, so that I have mentioned three manifestations of the same disease, different only because they exist in different localities.

Communications.

RESECTION OF THE OPTIC NERVE.

BY L. WEBSTER FOX, M. D.

(THIRD PAPER.)

Since my first paper appeared on the above subject, I have had frequent inquiries made about the instruments I described, as well as to where they could be obtained in this country. I have had illustrations made of the three most important ones and do not think that a repeated description of them for the benefit of those surgeons who wish to get them, will be amiss.

Fig. 1.

Fig. 1. Represents the duck-bill retractor which is the most important instrument used in the operation. With this, one overcomes the difficulty in keeping out of the way orbital fat and tissue, as well as making more room for the instruments used in grasping and severing the nerve. Being nickel-plated its concave surface acts exceedingly well as a reflecter, which is a desideratum when one is performing the operation with insufficient light.

Fig. 2.

Fig. 2. Is an instrument shaped somewhat like a lid elevator, having inserted, in its concave surface, four or five delicate pin points which are pressed against the eyeball, these points pierce the sclerotic coat but are not long enough to puncture it. The assistant pulls the eyeball around and thus exposes the optic nerve.

Fig. 3. Shows the form of the hooks used in holding the optic nerve, one is right-handed, the mate is left-handed.

The instruments designed by Mr. Carter for opening the sheath of the nerve, are just the instruments most useful in resection. In

fact without them it is almost impossible to perform the operation.

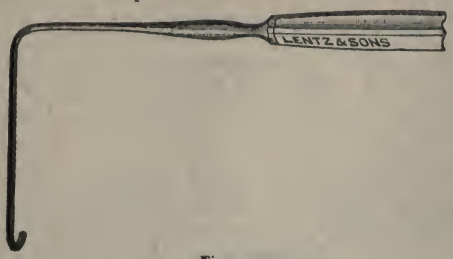

Fig. 3.

For those surgeons who did not read my description of the operation published in the REPORTER of February 7, 1891, I repeat it: "The lids are separated with the ordinary ophthalmostat; a vertical incision is made through the conjunctiva over the insertion of the external rectus muscle; the conjunctiva is dissected off as far back as the external canthus will permit. This exposes completely the muscle. Two silk threads are then passed through the muscle near its tendinous insertion. These threads will be required in a subsequent stage of the operation, to unite the detached muscle to the eyeball. The muscle is then cut and drawn to the temple side. This exposes the globe. With curved scissors, all tissue is then separated from the eyeball. The optic nerve is found by passing a hook, back of the eye-ball,—: a strabismus hook bent at a right angle. This hook brings forward the nerve, and then the retractor is passed downwards until it meets the nerve, and is then pressed down and out, keeping the adipose tissue out of the way. A second bent hook is inserted under the optic nerve, and also passed backward. A certain portion of the nerve becomes exposed, and with a delicate flat forceps the nerve is grasped and held firmly. This is to prevent hemorrhage from the ophthalmic vein and artery (central) after the cut with the scissors. The eyeball is rotated forward, so that the non-severed nerve becomes exposed and a small piece of its bulbar end is cut off. By keeping pressure on the orbital end of the nerve for a few minutes, all danger of hemorrhage is aborted. The eyeball is then rotated into place, and the external muscle re-adjusted. Over this the conjunctiva is replaced, and is held in position with black silk, which may be removed in three days. Antiphlogistic dressings are applied day and night for several days. Very little reaction follows, and in a week or ten days the eye has assumed its normal appearance, with no disfigurement, and the action of the muscle is complete."

Charles Lentz & Son are the makers, and I must say for them that they have reproduced the English models exactly.

ABDOMINAL NEPHRECTOMY, WITH THE REPORT OF A CASE.[1]

[1]Read before the South-Western Ohio Medical Society, at Hamilton, Ohio, April 4, 1891.

BY EDWIN RICKETTS, M. D.,

CINCINNATI, OHIO.

It is quite a coincidence that the first modern splenectomy by Pean, and the first modern nephrectomy by Simon, was done in 1869; both of these men deliberately planned these operations. Walcott, however, in 1860, removed a cancerous kidney, after having made a diagnosis of hepatic cyst. It is not my intention to recite statistics, which are decidedly antiquated, as compared with the results of individual operators, such as Tait, Thornton, Savage, of Birmingham, Morris, and others. Even the results of these men may not be striking, yet they are better than those of older operators. At this time the mortality stands at near 40 per cent. at the hands of the best surgeons. In abdominal neprectomies just now, the results in the hands of a few operators are far ahead of those in lumbar nephrectomies.

CASE.—Mrs. S., aged 33, married, one child eleven years of age. Trouble began in 1880, when she passed bloody urine during attacks of pain located in the region of the right kidney. These symptoms disappeared in time, but she gradually lost flesh and strength up to July 29, 1890, when she called in Dr. J. A. Brown, of Germantown, Ohio, as her family physician. He found her greatly emaciated and decidedly cachectic, with a history for the four weeks past of constant pain in right lumbar region, hectic fever and night sweats; a tender globular mass presented in the right lumbar region, firmly fixed, and extended from the floating ribs to the crest of the ileum forward to within three inches of the umbilicus.

After a few days of observation the opinion was given that it was a suppurating kidney, and an operation for drainage or extirpation was advised. Dr. Donellan was called in and concurred in the diagnosis, and also advised an operation. An effort was made in the way of treatment to improve the patient's general condition by preventing operation, but without any satisfactory result.

No previous history of pus in the urine

could be obtained, nor was pus present at the time of my visit to her, August 19, 1890. At this date I found the condition so tersely described by Dr. Brown, and agreed with him and Dr. Donellan both as to diagnosis and as to the necessity of an operation, notwithstanding the urine was normal in quantity and quality at the present time and had been so ever since the passage of bloody urine ten years before. Upon examination I felt a mass in right lumbar region attached seemingly to the liver; slight jaundice was present, but there was no history of hepatic colic. I advised exploratory incision by way of abdominal section. Consent was given, and I made the operation in the presence of Drs. Brown, Donellan, Horning, and Cochran, the latter gentleman assisting me while Dr. Brown gave the chloroform. I made a six inch incision longitudinally two inches to the right of the median line, beginning at the lower margin of the liver; upon completing my section the right kidney, freely distended and adherent to the liver, was exposed. I punctured it, got pus in considerable quantity, enough to justify an extirpation of the entire kidney, and so proceeded with that object in view. I trocarred all the pus possible after packing sponges about the kidney; I then broke loose the adhesions to the liver, and brought the kidney up into the wound, and ligatured *en masse*, cut away, sponged the surrounding parts well as some pus escaped, and put in a glass drainage tube. At the time of the operation the temperature of patient stood 102.5° F.; pulse 112. The amount of urine secreted during the following twenty-four hours amounted to 40 ounces, and still contained no pus or albumen. By the first week of the following September we had evidence of the presence of a pocket of pus, perhaps at the site of the removed kidney and nearer the lumbar region, where the glass drainage tube could not reach from the front, so we anæsthetized the patient, opened from the back, after removing the glass tube in front, carried one end of a well perforated soft rubber drainage tube through and through from front to back, the ends of tubes being tied to the right side of patient. This gave perfect drainage; warm water was forced through from front to back daily. The temperature and pulse soon dropped, and the patient has improved steadily ever since. She has gained 30 lbs. in weight, and is able to attend to her household duties. An insignificant anterior and posterior sinus discharges a small quantity of thin pus at intervals.

THE PNEUMO-THERAPEUTIC INSTITUTE OF BRUSSELS.[1]

BY DR. HOVENT,

OF BRUSSELS.

Last summer I received a visit from Dr. S. Solis-Cohen, with whom I had already been corresponding on the subject of pneumotherapy. I was gratified by his expressions of astonishment on inspecting the Pneumotherapeutic Institute. I also felt a pride in being able to teach something to a *confrère* from the country whence progress in every science comes to us.

At the request of my guest of some hours, I shall endeavor to describe the establishment with which I am connected, briefly relate its history, and indicate the physiological and therapeutic actions of air-baths.

In 1879, a number of prominent Belgians who had undergone successful aëro-therapeutic treatment at Contrexéville, a French spa, determined to establish an institution for a like purpose at Brussels, and accordingly invited Dr. Tamin Despalles, under whose care they had recovered, and who was already well known through his works on neurology and aëro-therapy, to come and create in Brussels an establishment in which all the improvements in his favorite treatment should be found. The invitation was accepted and a limited society was at once organized. The founder, however, did not long live to see the fruition of his work, and was succeeded in turn by a lecturer at the University, an academician among others, and finally by myself.

The Pneumo-therapeutic Institute of Brussels is the largest and most complete in the world; it is situated in one of the healthiest parts of the city, near a small park. As first constructed, it was intended to practise therapy, aëro-therapy, including compressed or rarefied air-baths, and also anæsthesia by the method of Paul Bert; afterwards, this last method and the azo-therapy were given up and numerous improvements were successively introduced; so that now the establishment furnishes the following services:

1. Baths of compressed or rarefied air, with or without supersaturation of oxygen gas.

2. Inhalations of compressed air with expirations into refined air.

3. The sale of oxygen gas in the city, the country, and even abroad.

[1] Read by Dr. A. A. Eshner, before the Phila. Co. Med. Soc., June 10, 1891.

4. Electro-therapy, by static and dynamic machines.

I have nothing to say upon these three last points. The works of S. Solis-Cohen have elucidated the treatment by pneumatic differentiation better, if with less prolixity, than any author of our continent. To make the establishment complete, it is furnished with the apparatus of Maurice Dupont, Geigel and Mayr, Hovent, Schnitzler, Solis-Cohen, Tobold, and Waldenburg. I use these apparatus, however, only upon request by my *confrères*, because I have personally ascertained that, while they are of real value, yet, as compared with the air-baths, their utility in several directions is very questionable. In this connection a recent paper by my friend, Dr. Arntzenius, of Amsterdam (*Geneeskundige Courant*, 29 June, 1890), is of interest.

Oxy-therapy and electro-therapy are methods of treatment better known and more widely practised in the United States than in Europe. I will, therefore, not consider them.

I now come to the subject which is really interesting to my American colleagues—baths of compressed or rarefied air. These are given by means of seven iron chambers of varying capacity, some being capable of comfortably containing from two to ten persons. Each chamber is very well constructed; it is supplied with several windows of glass, two centimetres (three-quarters inch) thick; it has a double door, or perhaps better expressed, two doors enclosing a lobby, in which the doctor, entering by the outer door, can shut himself, and then equalizing the pressure, can open the inner door and speedily reach the patient for any purpose without great alteration of the pressure in the chamber. Another smaller door, also duplicated, serves for the purpose of handing to the patient books or whatever may be desired. Electric-bell, elbow-chairs, toilet-tables, manometer, thermometer, hygrometer, etc., are all at hand.

From the chamber so described emerge six pipes leading to the underground tanks of 1, compressed; 2, rarefied air; 3, nitrogen; 4, oxygen gas; the last two pipes are for the purpose of purifying the air, of which I shall soon speak. Each of the first four pipes is attached to a little tank which permits of the measurement of the quantity of air, nitrogen or oxygen, introduced into the chamber, or the quantity of air removed.

The large tanks in which the air or gas is compressed, or rarefied, are ten in number. Each holds several thousands of litres. The compression or the rarefaction of air or gas is obtained by means of a gas engine of eight-horse power. The tanks will bear seven or more atmospheres of pressure, or a corresponding degree of rarefaction.

The manipulations are as follows: If it is desired to place the patient in a chamber, and the pipe connecting the chamber with the tank of compressed air, for instance, is opened, this compressed air rushes in; its quantity can be regulated according to circumstances. The reverse takes place if rarefied air is to be used; the air of the chamber rushes out and the patient remains in a relative vacuum.

One serious and even capital drawback to the employment of air-baths lies in the fact that in the course of the two hours, the duration of an ordinary sitting, the air within the cabinet soon becomes foul from the processes of respiration, perspiration, etc. The establishment at Brussels is the only one in which this inconvenience is efficaciously overcome. The air is being constantly withdrawn from the occupied chamber, and purified by being passed through several iron Woltt's jars with chemicals, to be again introduced, the same degree of positive or negative pressure being always maintained.

It may be desirable to impregnate the atmosphere of the chambers with the vapor of certain medicinal agents; it is an easy matter to place the substance to be used in the path of the air current, or more simply to put some drops of an essence in boiling water into the chambers. I frequently and successfully use pumiline essence.

This is, in brief, all that I think necessary to give a fair idea of the application of the air-baths. I shall now consider their physiological and therapeutic action.

To treat this subject at length, as it deserves, would require too much space; therefore, I shall confine myself to an epitome which, I hope, will serve as an index for the reader. In English medical literature I know only of the papers of the eminent C. Theo. Williams (on air-baths; I shall say nothing of pneumatic differentiation). This is in striking and unaccountable contrast with the profuse medical literature of the continent. I shall quote from some of our authors, but chiefly from my personal experience.

The compressed air-bath more completely expands the pulmonary vesicles and increases their elasticity; the diaphragm and the base of the lungs descend lower; the respiratory process is more perfectly and less frequently

performed; the peripheral circulation is less active, with some degree of decongestion of the skin and the mucous membranes (nasal, laryngeal, pulmonary, etc.); the pulse is less frequent and more full; the appetite and strength increases rapidly; the nervous system is undoubtedly invigorated. One may observe that these effects are carrollaries of one another and result either from mechanical or chemical action; indeed, the oxygen of compressed air is no longer oxygen, but some form of ozone.

The rarefied air-bath has not been so well studied; nevertheless, it is employed with much success by some practitioners, who seek in it a reproduction of mountain atmosphere. It has also been recommended for rickety children, when the thorax is deformed. Recently it has been used alternately with the compressed air-bath, when a doubt exists as to whether a patient should be sent to the mountains or to the seashore. The therapeautic use of the air-baths are very numerous, but easily deduced from the foregoing considerations.

Asthma is the principal affection for which compressed air-baths are employed. 80 per cent. of recoveries are obtained after twenty to sixty sittings. During the first sitting the dyspnœa disappears when the pressure of air is sufficient; this result becomes permanent only after a number of sittings. I remember but one case, that of an American patient coming from Oregon, in which the paroxysms reappeared as soon as the pressure was lowered. The patient was very well while under pressure, and I have frequently kept him enclosed for eight or ten hours instead of two. I diagnosticated a traumatic medullary lesion, limited to the respiratory center.

In pulmonary emphysema, the air-bath empties the vesicles and increases their elasticity, so that the dyspnœa diminishes. The first sitting is usually followed by a notable improvement. As in asthma, the success is generally striking and permanent. Pulmonary congestions, pulmonic processes preceding or following pneumonia and hæmoptysis, are cured mechanically, since the compressed air provokes anæmia of the pulmonary tissues. I have some absolutely confirmatory observations. Chronic bronchitis and bronchorrhœa are always improved, so far as concerns dyspnœa, cough, expectoration, and general health. The first effects of the treatment are an increased expectoration up to the point of completely ridding the lungs of mucus, and simultaneously a decongestion of the respiratory mucous membranes. The last action must be invoked in explaining the beneficial influence of compressed air in coryza, chronic pharyngitis and laryngitis, and in that exaggerated susceptibility of the mucous membranes, as a result of which the patient is constantly exposed to the danger of catching cold. I have recorded two cases of chronic amygdalitis, in which resection had been contemplated, and in which I obtained complete cures by compressed air-baths.

In whooping-cough, "the beneficial action of air-baths is undeniable," said Dujardin-Beaumetz. The cure is obtained after ten to fifteen sittings; and generally the child gains from one to three pounds in weight. Joccoud charges with gross neglect the physician who does not submit his consumptive patient to aëro-therapy. Oertel thinks the compressed-air treatment far superior to climatic treatment in any country. Prof. Bertin (Montpelier) has recorded five cases of recovery in consumptives in the third stage.

Heart disease had long been considered the only drawback to aëro-therapy, but since I have successfully treated a number of cases with cardiac complications, I no longer hesitate to treat such cases, only using certain precautions.

In catarrhal deafness compressed air effects a natural catheterism. I have not infrequently seen patients suffering with asthma or other complaints emerge from the chamber declaring that their hearing was better than for many years.

Dujardin-Beaumetz says: "Compressed air-baths are to be preferred to any other method of treating chlorosis, anæmia, diabetes, albuminuria, and gout."

Obesity, also, is favorably influenced as a result of the acceleration of organic combustion and the more active elimination of urea and carbonic acid.

In conclusion, I must add that Dr. Arntzenius has cured some cases of neurasthenia, and that I have recorded three observations of dysmenorrhœa being permanently cured by a pneumo-therapeutic course. I think these results are due to the general invigorating power of the treatment.

If I should quote all the authors who have written upon the subject of air-baths, not only in France, where the treatment was orginated, but in Russia, Scandinavia, Holland, Germany, Italy, and Spain, the list would be a very long one. I wish only to note that none of them has expressed an unfavorable opinion. I am convinced that the treatment which I have expounded is entirely reliable, and I shall be happy if my

paper contributes to make the medical profession of the United States acquainted with the better method of pneumo-therapy.

(For discussion, see Society Reports.)

Society Reports.

PHILADELPHIA COUNTY MEDICAL SOCIETY.

Stated Meeting, June 10, 1891.

The President, John B. Roberts, M. D., in the Chair.

DR. HOVENT, OF BRUSSELS, PRESENTED A PAPFR ON THE PNEUMO-THERAPEUTIC INSTITUTE OF BRUSSELS.—(See p.11.)

DISCUSSION.

Dr. Thomas J. Mays: I am a firm believer in the efficacy of compressed and rarefied air in all kinds of chest diseases as well as in general disease of the body. My experience has been limited to the use of these agents with the Waldenburg and Cohen-Richardson apparatus. These apparatuses are of value in many forms of lung disease, especially in incipient phthisis, bronchitis, and in asthma. You cannot use rarefied and compressed air indiscriminately. Rarefied air is suited for some conditions, and compressed air for others. I think also that in certain forms of incipient phthisis compressed air will tend to aggravate the disease. If the temperature is above 100° its use will tend to increase it. I have given up the use of compressed air alone, and now employ oxygen and nitrous oxide under pressure, either with or without air.

In Berlin I saw cabinets similar to those described in the paper. They certainly do a great deal of good, but strange to say, most of the writers speak of the value of compressed air without saying much of the value of rarefied air. I think that by immersing a patient in rarefied air you obtain the same effects as you would by placing him at a high altitude. I do not think that the good comes so much from the effect upon the lung as from the influence which is exerted upon the whole body. By taking off part of the pressure from the surface the resistance to the circulation is diminished, and in that way the blood is permitted to reach the periphery and nutrition of the outlying parts is stimulated. I think that in this lies the great and chief value of mountain air in the treatment of comsumption.

The influence of compressed air upon hearing has been referred to. It has been found in the cabinets at Berlin that the compressed air increased the sense of hearing of every one, but, so far as I know, this is only temporary. Those who were hard of hearing will improve for a time, but soon the hearing is as bad as before.

Dr. S. Solis-Cohen: Except from reading, I know very little about this particular branch of pneumo-therapeutics, my experience being confined to the method by which the patient inhales from or exhales into compressed or rarefied air. The method of immersing the patient in an atmosphere of modified pressure requires expensive apparatus, but from what I saw in Brussels, and from the examination of patients with a comparison of their previous histories, I believe that the method accomplishes all that Dr. Hovent claims for it. I went into the cabinet myself, but did not remain long; the noise in the ears and the sense of fulness in the head were sufficiently unpleasant to make one wish to get out as soon as possible. All who have used this method, with the exception of Waldenburg, claim that it is superior to the differential method, though they admit the greater availability of the latter. I have had no opportunity of comparing the two methods, but my experience with the differential method has been thoroughly satisfactory. The remark of Jaccoud, quoted by Dr. Hovent, will well bear repetition; I would, perhaps, slightly modify it and say, "that whoever fails in a suitable case of phthisis to give his patient the benefit of a trial at least of aëro-therapy, fails to do his duty." I do most sincerely believe that the routine writings of prescriptions, with a neglect of the mechanical means so far superior in many cases, is a failure on the part of the medical profession to do its duty toward those whose lives are, humanly speaking, entrusted into its hands, My personal experience now extends over ten years, and I should not like any patient of mine to be deprived of the opportunity of a trial. Inhalation of compressed air will not work miracles. It will not revive the dead. But it will help the patient to fight the disease. It dilates the air-cells, improves the quality and distribution of the blood, and gets rid of accumulaled decomposiug products which may give rise to septic fever.

Dr. James C. Wilson; I would ask whether it is not the experience of patients that after a time these unpleasant sensations, due to disturbance of circulation, diminish?

Dr. Cohen has more right than any one else to arraign the profession for the neglect of these mechanical measures, for he has

been a pioneer in this country, and a consistent practitioner in this particular branch of therapeutics. At the same time, I am at a loss to understand what view a man occupying Dr. Cohen's position can take of the decadence of the enthusiasm which followed the invention of the pneumatic cabinet, four or five years ago. There was, unquestionably, a most excellent device for the practice of such methods as Dr. Cohen advocates. Many medical men availed themselves of this apparatus, but now one hears nothing of the pneumatic cabinet. Many who at first claimed excellent results from the apparatus have abandoned its use.

Dr. Lawrence F. Flick: I have no personal experience with this mode of treatment. I, however, believe with Dr. Mays, that compressed air may do considerable harm in a certain class of cases. I have seen some things in practice which tend to confirm that view. Where the disease is in an acute stage the quieter the circulation the better for the patient. I have seen a case where even a little exertion more than was prudent precipitated a general tuberculosis where the disease had been simply local. I believe that there is a class of cases where the application of compressed air would be of benefit —cases in which the acute stage is passed, and there is considerable material to be gotten rid of.

It seems to me it is hardly fair to arraign the profession for neglecting the use of this method of treatment. It is scarcely right to deal in a general way with this subject without giving detailed accounts of the benefits of the treatment. If such wonderful results are obtained, we should be shown those results.

Dr. Solis-Cohen: In reply to Dr. Wilson, I would say that there is no question that tolerance to the effects of immersion in compressed air is gradually established just as tolerance to the effects of altitude is established.

Allusion has been made to the absence of reports of the effects of rarefied air-baths. These have been tried, but abandoned. Paradoxical as it may seem, it is the compressed air-bath and not the rarefied air-bath that simulates the therapeutic effects of mountain residence. The complaint of Dr. Flick is not well founded. These methods have been in use since 1838, and numerous cases are on record. I have reported a few, but not many, because at this late day it is superfluous.

In reference to the pneumatic cabinet, the methods employed in exploiting it were a sufficient reason why it should not find favor with the bulk of the profession. Then, again, it is a very troublesome and expensive means of doing what can be done much more cheaply and simply. Many physicians of high repute, however, still use it. Among others I may cite V. Y. Bowditch, of Boston. We may rest assured that no physician who has used pneumatic treatment will ever abandon it. The question of apparatus is secondary. The pneumatic cabinet has the same disadvantage that belongs to the pneumatic chamber, and that is, that the patient is compelled to visit the physician to obtain the benefit of the treatment. With portable apparatus, which can be placed in the patient's home, this objection is overcome. If I take any credit to myself it is for simplifying and cheapening the machinery so as to make this possible. As a matter of course, pneumatic measures have their indications and counter-indications, as atropine, morphine, bromides, and drugs in general have theirs. No one uses atropine to produce bromide effects. Air has its definite field of use, just as atropine and bromide have theirs.

Nobody uses compressed air in acute tuberculosis. This was long ago laid down as a counter-indication by Waldenburg and others. It is not to be used in certain diseases of the heart, or in cases with large cavities with extensive septic processes. Between cases with acute processes and the stage of extensive excavation, as well as in the very early stages of so-called incipient phthisis, lies an extensive field for the employment of mechanical measures. They are used not as exclusive measures or panaceas, but to produce certain definite and highly desirable effects that cannot be produced by any other agent; certainly not by drugs, whether creasote or iodoform, hypophosphites, or cod-liver oil, tuberculin, or cantharides. Especially with patients who would be benefitted by mountain climate, but who cannot get away from home, will pneumatic treatment prove a valuable substitute. Some patients have even taken their machines to the mountains, because they dreaded to be deprived of the good effects. I repeat that the treatment works no miracle, but every patient has a right to the additional chance for life it may give him, and the physician who deprives him of that right is at least negligent. We will never save all the phthisis cases that can be saved until we get rid of the idea that "specific medication" is a possibility, and concentrate our attention on improving the

patient's general and local vigor and nutrition.

Dr. Mays: I think that the principal reason why the pneumatic cabinet has fallen into disuse is because it cannot be used in private offices. In hospitals it can be used and is used.

In regard to the use of compressed air I would say that I made no reference to acute diseases when I cautioned against its indiscriminate employment; but thought of subacute or chronic pulmonary affections. I have in mind now a case of catarrhal phthisis of about eighteen months' standing, which I am quite sure became aggravated after the third inhalation of compressed air. She became worse in every respect, and died about two months later. I have knowledge of other cases who were served somewhat in the same way, and I seriously think that great care should be exercised until we know its influence on each case.

I certainly think that Dr. Cohen must be mistaken when he says that the effects of compressed air are the same as those of the rarefied air of mountains. Not to my recollection have I seen any one else express this view.

Selected Formulæ.

TREATMENT OF PIGMENTATION IN PREGNANT WOMEN.

In the *Journal de Médecine de Paris*, the following ointment is recommended to be rubbed into the affected parts twice daily, to remove the pigmentations which so often disfigure pregnant woman:

℞

Cocoa butter,	
Castor-oil	aa ʒ ij¼.
Oxide of zinc	gr. v.
Yellow oxide of mercury	gr. ij.
Essence of rose, enough to perfume.	

—*Therapeutic Gazette.*

THE CURE OF PERSISTENT DANDRUFF.

The following is recommended in the *Lancet* by Mr. Purnell for the relief of this troublesome affection: An ounce and a half of iron wine, one drachm of liquor arsenicalis, three drachms of syrup, water to two ounces. Of this one drachm is to be taken in water after meals. Then an ointment consisting of four drachms of the red oxide of mercury ointment, an ounce and a half of benzoated lard, and two minims of the essence of bergamot should be rubbed thoroughly into the roots of the hair, and its use continued for some time.

ON ICHTHYOL VARNISHES.

Unna undertook experiments with various substances in order to obtain an ichthyol varnish which was soluble in water and which would offer the advantages and none of the disadvantages of other ichthyol preparations. He recommends the following as the best:

℞

Ichthyol	40 parts.
Starch	40 "
Sol. of albumin	ca. 1–1½ "

The starch is to be evenly mixed with the water, then the ichthyol is to be well rubbed up in it, and lastly the albumin is to be added.

He also advises another varnish containing carbolic acid, but as this latter would precipitate the albumin, the formula is a little different:

℞

Ichthyol	25 parts.
Carbolic acid	2½ "
Starch	50 "
Water	22½ "

The ichthyol and carbolic acid are to be dissolved in the water by means of heat and the starch is then added to the solution.

Both of these varnishes dry rapidly and completely, do not dissolve under the influence of sweating, and can be easily washed off. They are applicable for the treatment of various circumscribed cutaneous diseases, and are recommended for acne, rosacea seborrhoica, rosacea simplex after frost-bite, and especially in lupus erythematosus. Also in certain forms of eczema, in intertrigo, in his tubercular eczema (a large pustular eczema occurring especially about the natural openings of the face, associated with tubercular glands and occurring in children, generally described as of a strumous type—Elliot), and again in erysipelas.

To the ichthyol varnish chrysarobin (2 to 5 per cent.) can be added, or pyrogallol, resorcin, sulphur, etc., and consequently it becomes useful in the treatment of all parasitic eczemas, of psoriosis, or of other cutaneous diseases presenting circumscribed lesions and patches. He suggests that when a new drug is added to the varnish an equal amount of water or of some oil, preferably linseed oil, should likewise be mixed with it so as to facilitate its incorporation and to preserve the thick-fluid consistency of the preparation.—*Jour. Cutan. and Genito-urin. Dis.*

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LEADING ARTICLE.

MODIFICATION OF INFECTIOUS INFLUENCES BY MICRO-ORGANISMAL ANTAGONISM.

In a leading article published in THE REPORTER, (May 9, 1891,) the writer indicated a four-fold possibility of influencing infections, by the utilization, first, of the products of bacteria, which in a number of instances have been found to possess an inhibitive power over further development of the organisms from whose activities they have originated; second, of the antagonistic relations of certain bacteria toward other micro-organisms; third, of the antibacterial influence of various substances included under the general term, drugs; and finally, of those extraneous conditions which act unfavorably to the development of disease germs. The first of these was incidentally considered in relation to the recent attempt of Prof. Koch to overcome the tubercular infection; and sufficient was said to suggest the scope of its possible utility.

In a somewhat less, but nevertheless existing, degree of importance, the second of these considerations may be regarded; especially as there is no little evidence from laboratory sources that such an antagonism clearly exists between many growths. Moreover most of those micro-organisms whose influence is sufficient in contaminated cultures of pathogenic bacteria to destroy, or retard the growth of the latter, are as a rule saprophytes, nonpathogenic so far as the human economy is concerned. In what manner this antagonism is productive of its visible results is not understood; although it may be conjectured that two factors enter into the case, the simple effect of crowding and exhaustion of the elements necessary to life by the more actively vegetating growth, and the elaboration of the latter of some material deleterious to the existence of the other species. It is of interest in this connection to recall as an illustration the suspected influence exerted against tetanus by the suppurative micro-organisms.

It is a well-known feature of tetanus that the affection is peculiarly liable to develop in deep punctured wounds, such as are not apt because of the relative absence of oxygen to permit any marked growth of the pyogenic micro-organisms; while on the other hand in case of open, freely suppurating sores exposed to similar circumstances of infection, as in the feet of horses, the disease is not nearly so apt to manifest itself. Such a fact may be readily explained by the supposition that where free growth is accorded to the pyogenic bacteria there is formed some matter which exercises distinct retarding influence upon the tetanus micro-organisms, or that the full development of the former prevents by actual space encroachment the advance of the latter. The fact that suppuration is in a slight degree, at least, present in these deep, narrow wounds from which tetanus originates, does not militate against the supposition, since by the exhaustion by the pyogens of the limited amount of oxygen derived from the air supply a favorable circumstance is afforded the tetanus bacilli, which are essentially non-ærobic, the suppurative bacteria, however, being unable, from want of free ingress of air, to advance to any proportion sufficient to act against the tetanus germs. In the same connection it is to be recalled that Garré, several years ago, called attention to the fact that in tube cultures Flügge's fluorescent bacillus was persistently and fully antagonistic to the growth of typhoid bacilli and the pneumobacillus, and exercised a retarding influence upon the cholera spirilla. So too Pawlowski has come to the conclusion that the cure of anthrax is possible by bacterio-therapeutic means, this end being attainable by the subcutaneous injections of various micro-organisms at the point of entrance of the anthrax bacilli into the economy, the antagonistic germs employed by this investigator being Friedländer's diplococcus of pneumonia, the staphylococcus aureus, the bacillus prodigiosus, and the streptococcus of erysipelas. In connection with the last micro-organism the results of Pawlowski have been fully corroborated by von Emerich and Mattei. It is relevant, too, to recall, as mentioned by Garré, the rapid disappearance of the cholera germs from the effluvia in the presence of the saprophytes which are abundantly found. The researches of Pasteur, in relation to anthrax and fowl-cholera, and those of Heer upon typhoid fever and the yeasts and thrush and diphtheria bear upon the question in point. The numerous attempts toward the cure of malignant tissue growths by inoculation of such germs as the streptococcus of erysipelas are to be mentioned in this same category; although as an illustration these endeavors have little force from the very conflicting reports of results and from the fact that such growths are not even probably proved to be the products of micro-organismal activities.

The ultimate importance of this, as of any other medical subject, centres in its possible value in the management of disease. Herein at present, however, its demonstration practically fails. Under natural conditions the coincidence of infections in the economy has not been sufficiently studied in relation to the heightening or lowering of the consequent symptoms and little inference can be drawn until further attention is attracted to this feature. It is interesting, however, to cite here the observations of Woodward in relation to the affection to which the term "typho-malarial fever" has been applied, a type of disease in which from the statistics collected by the writer named from the records of the civil war the mortality is three or four times less than in the uncomplicated type of typhoid fever. Of course, this illustration, too, is open to the very grave objection that the affection named is not surely proved to be a combination of the malarial and typhoid infections; but in its clinical course it presents such a combination of symptoms, that, until it is shown to be independent of the combined pathogenic influences, it cannot well be overlooked. Within the recent experience of the writer there occurred in a child an attack of croupous pneumonia of the apex of the right lung, during the course of which a mild attack of varicella appeared; there was the usual

severity of symptoms of the pneumonia except in the case of the mental disturbance which although usually pronounced in such cases in this was of exceedingly mild character, and the disease ended by lysis. The varicella was insignificant, and it was particularly noted that it exercised no exaggerating influence upon the already existing pneumonic process.

It is true that there is nothing irrefutable, nothing decisive in these citations; but thus grouped they give some support to a theory which seems quite plausible and opparently only awaits the discovery of the surely existing proof. As to its therapeutic limitations, could the establishment of the principle upon sound clinical and experimental grounds be fixed, a field of the greatest importance opens. There can scarcely be imagined within human power so ready a means of modifying the severity of epidemics or the eradication of the malignant infections than by the introduction into the midst of the infected population an influence of infectious character having antagonistic tendency toward the primary disease cause. In their treatment, too, of the individual case there must be conceded an advantage if the promise of the subject be in any degree fulfilled. At the most the idea is but a step removed from the practice of vaccination in small-pox, in which case a virus, modified in intensity by passage through the bovine economy, grants immunity from and reduces the severity of already established infections of variola; possibly many of those who are disposed to regard vaccinia as a disease entirely separate from small-pox may look upon its results as illustrative of the applicability of the antagonism existing between micro-organisms.

Correspondence.

"ARSENITE OF COPPER IN DIARRHŒA."

EDITOR OF THE MEDICAL AND SURGICAL REPORTER.

Sir:—Allow me to correct a statement in the last issue of THE REPORTER which is calculated to create a wrong impression. In referring to the employment of arsenite of copper in diarrhœa, page 792, you have quoted Dr. Hintz, from a French journal, and suggest that he took his idea from my work in bringing this remedy to the attention of the profession. It is due Dr. A. F. Hintz, of Idalia, Colorado, to state that his paper appeared originally in the issue of the *Therapeutic Gazette* for February, 1891, and that in his communication, he mentioned the fact that he had first learned of the value of the drug from a communication which I published as early as 1888; he also referred to other papers of mine on the same topic.

Very Respectfully,
JOHN AULDE, M. D.
4719 Frankford Ave., June 20, 1891.

Book Reviews.

THE POCKET MATERIA MEDICA AND THERAPEUTICS. A resumé of the action and doses of all official and non-official drugs now in common use. By C. Henrie Leonard, A. M, M. D. The Illustrated Medical Journal Co., Detroit, Mich., 1891.

This volume is a pocket manual upon Materia Medica and Therapeutics, in which the author has incorporated all drugs of sufficient merit to warrant attention, whether official or otherwise, and includes remedies of as late introduction as 1891.

The general arrangement of the book embraces the pronunciation, genitive case ending, common name and dose, including the metric dose. *If a plant*, the part used, habitat, natural order, and description of plant and flowers, with its alkaloids, if any. *If a mineral*, its chemical symbol, atonic weight, looks, taste, where found, and its peculiarities. The action and uses of the drug, its antagonists, incompatibles, synergists and antidotes. Officinal and non-officinal preparations, with their medium and maximum doses, based so far as possible upon the U. S. Dispensatory.

Typographically, the book appears to be free from serious error, for which fact the publishers and author are to be congratulated.

Altogether, it is a handy manual for the student, physician or druggist, and it can be safely recommended as the most complete small book issued on this subject,

A COMPEND OF GYNÆCOLOGY. By HENRY MORRIS, M. D., late Demonstrator of Obstetrics and Diseases of Women and Children in the Jefferson Medical College, Philada., Etc., With forty-five illustrations.

These recent additions to the literature of a department of medicine so rapidly widening its bounds each year, should rather be termed a *digest* than a "quiz-compend," for it is not arranged in questions and answers, but gives a concise epitome of each subject treated. The author has been fortunate in the selection of excellent illustrations, and some features of his book are especially worthy of notice, including his original cuts. The chapter on gynæcological examinations is admirably suited to both student and practitioner, and the writer has succeeded in incorporating many very practical points. The portion of the work devoted to diseases of women, combines the latest ideas with an arrangement commendable for its exactness. A good feature also is the diagram of the proper positions of operator, assistants, nurses, instruments, etc., during ovariotomy. The description of this operation is well-timed and well systematized. In reading any book we naturally find things to hope for, but in reviewing this one the praise-worthy features entirely overshadow any defects it may contain, and the author has amply accomplished his object, in producing a book of use alike to beginner and busy practitioner.

PERISCOPE.

THERAPEUTICS.

ANTIPYRESIS BY DRINKING LARGE QUANTITIES OF COLD WATER.

Although he is a warm advocate of the bath treatment, Prof. Cantani regards slight reductions of temperatures as preferable in many cases to the marked antipyresis produced by a cold bath. During many years he has obtained this result by letting the patient drink large quantities of cold water, and administering, at least twice daily, a large enema of some cold slightly antiseptic solution. The same method of antipyresis is not equally efficient in all cases of fever; in typhus, for example, the most marked reductions of temperature are obtained by the drinking of large amounts of cold water, whilst in typhoid, cold enteroclysms yield better results. In typhus the patient is given from five to six quarts, and sometimes even eight quarts of cold water during the twenty-four hours, and the windows of the room are kept open day and night. In some of the cases the duration of the disease was markedly shortened, the temperature in one case being reduced from 41° to 37° on the eighth day. In typhoid fever large quantities of cold water are introduced into the bowel, and the effect of these is supplemented by letting the patient drink as much as possible of cold water. It was found by a large number of observations that after each enteroclysm of two quarts of water the temperature fell 0.5°–0.8– C. in the axilla, and this reduction was maintained for two, three or more hours. The water injected, which had a temperature of 11°, was usually evacuated in ten to thirty minutes, and then had acquired a temperatue of 35°–37° C.

Both of the above mentioned methods of antipyresis increase the quantity of urine and diminished its specific gravity, especially the drinking of water. This proves that the cold water is absorded in large quantities and then cools the entire body and even the blood, an effect more certainly obtained than with other hydro-therapeutic methods. Thus the internal organs which have the highest temperature during fever are cooled, the tissues are permeated and cleaned by the water and freed of ptomaines, and this takes place without disturbances of any kind, except occasionally a slight chill.

In ileo-typhus, the author has used for many years enteroclysms of two quarts of cold water (11°–12° C.) containing three, six or ten grammes of tannic acid and ten to fifty centigrammes of crystallized carbolic acid, and usually also one to two grammes of hydrchlorate of quinine. These are repeated twice daily, and their effect is sometimes astonishing. They prevent meteorism, or when it is already present, they cause it to disappear after two or three applications. The intestinal symptoms are reduced to a minimum, and the fever reduced and its duration shortened. In typhoid fever, if enteroclysis is employed at the commencement, it is possible in the majority of cases to abort the disease.—*Centralblatt f. allgem. Pathologic und path. Anatomie,* February 1, 1891.

THE TREATMENF OF MALARIA.

Laveran finds that in the contest between the organism and the hematozoons, the leucocytes play an important *role.* It is a well-recognized fact that if an insoluble and finely-pulverized substance be injected into the blood of an animal, the leucocytes rapidly invade this powder and charge themselves with its elimination from the blood (Ponfick, Hoffman, Langerhaus).

The reseaches of Metchnikoff prove that the leucocytes not only invade inert powders and the bodies of microbes, but also, in a great number of cases, the living pathogenic microbes, and that this property, known as *phagocytosis*, plays a very important *role* in the evolution of infectious diseases and in the phenomenon of immunity. The cells of the splenic pulp and those of the endothelium, of the connective tissue, and of the pulmonary epithelium participate in this power. He has also concluded that the paroxysm of the fever persists during the life of these micsobes in the blood, ceasing only when the parasites become the prey of the phagocytes. Especially is this marked in relapsing and malarial fever. The resistance which the microbes exert against this action of the leucocytes may be of long duration if they be lodged in the spleen or in the marrow of bone.

Wyssokowitsch has noticed that the spores of the *bacillus subtilis* lodged in the spleen were still living at the end of three months, an interesting fact in a point of view of the study of latent microbism.

Metchnikoff, Golgi Gamaleia, and others insist upon the destructive action of heat upon the microbes, while, on the contrary, cold diminishes the activity of the phagocytes. It is well known that an organism placed in the best general condition will resist most successfully the inroads of the pathogenic microbes, whilst all debilitating causes militate against the cure of malaria. Laveran himself has observed in animals whose blood contained hæmatozoa, that under the influence of an abundant alimentation the microbes disappeared, while dilatation favored their development. The anæmic diseases— over-fatigue, ill nourishment—are attended with frequent relapses of the fever, and the salts of quinine themselves seem to become powerless in preventing these relapses. On the contrary, under the influence of only a good regimen and rest, frequently the condition of malarial patients will ameliorate, the anæmia grow less, the relapses less frequent, and a cure may occur without the intervention of a more active medication, simply because the organism has been placed in the best hygienic condition.

All the tonics have, consequenty, a favorable action upon the progress of the disease, and foremost among these may be placed wine, coffee, and arsenious acid. Arsenic taken in small doses is of great service in the treatment of rebellious fevers with the malarial cachexia. If given in large doses, however, relapses of fever will often be produced, and the condition of the patient aggravated. Hydrotherapy is valuable, always used as a tonic medication. It succeeds sometimes when other medications have failed. It is well to know, however, that the first treatment may provoke a relapse ; hence it is necessary to proceed with prudence, beginning with short and lukewarm douches before arriving at cold douches, not touching at first the spleen, and prescribing some doses of quinine at the same time. One can readily understand that a cold douche, especially if applied over the splenic region or following a paroxysm, will cause contraction of the splenic vessels, driving the hæmatozoa into the circulation. The malarial patients who in thermal stations—Vichy, for instance—take these waters both internally and in the form ot baths, often have relapses at the beginning of the treatment, when they do not proceed with prudence. The change of climate is often beneficial to these patients, because the great heat of malarial climates is very debilitating, giving rise to exhausting sweats, nights without rest, and dyspepsia—all of which are corrected in a better climate. Quinine is of invaluable service in the treatment of these fevers, especially acting as a specific in the chronic forms. It has a very powerful destructive action upon all microbes, especially upon the protozoa, to which group the hæmatozoa belong. These rapidly disappear from the blood of patients who are submitted to a course of quinine medication. The spherical bodies and the flagellate forms disappear first. The treatment must be continued for some time to insure entire destruction of the microbes. It is probable that the phagocytes invade more readily the hæmatozoa when they have been killed or benumbed by the salts of quinine, but that the activity of the phagocytes is not directly influenced by the quinine. *La Médicine Moderne*, February 19, 1891.

ACTION OF OPIUM AND MORPHINE ON THE BOWEL.

Spitzer has published (*Virchow's Archiv*, cxxiii, Heft 3, 1891) an experimental investigation of the action of opium and morphine on the intestinal canal. His experiments were carried out on frogs, rabbits, and men ; his objects were to increase our very defective knowledge of the action of opium on the intestine, and to determine whether, as is generally assumed, opium is superior to morphine as an anti-diarrhœic and anodyne in intestinal affections. In frogs the bowel

was exposed and kept moist with saline solution. Very small doses of watery extract of opium given subcutaneously sufficed to diminish the sensitiveness of the bowel to painful stimuli, while leaving intact the sensitiveness to stimuli which simply call forth peristalsis, the skin sensitiveness being also unaffected, and there being no general narcosis. In this condition the action of the opium may conceivably be exerted on the brain, or the spinal cord, or on nerve centres in the wall of the bowel. The author concludes it cannot be on the brain, as the same result is obtained with decapitated frogs; he also thinks it cannot be on the cord, as its functions are otherwise left intact. The action must, therefore, be on the bowel locally, and this opinion is supported by the fact that even smaller doses given *per os* have an equal effect. That opium acts locally as an anodyne on the intestinal canal, apart from its general action, he further proves by giving a frog strychnine, and then tying the bowel midway between the stomach and anus. Stimulation applied to either half of the bowel equally called forth tetanic convulsions, but when a solution of opium was injected into the lower half, its sensibility was found to be greatly lessened in comparison with the upper half. Spitzer holds that the opium does not paralyse the ends of the sensory nerve in the bowel, but sensory ganglia which, he assumes, lie in the course of the sensory nerves in the wall of the canal. These get an undue share of the opium as the alkaloids are excreted from the blood into the intestine, are absorbed into the blood again, and again excreted into the intestine, so that there is a constant circulation of them in the blood vessels of the intestinal wall. The motor ganglia are also probably affected in the same way as the sensory, but either not so powerfully, or the action is not so readily demonstrable. Larger doses are required to diminish peristalsis than to diminish sensibility in the bowel. The diminution of peristalsis may be due to paralysis of motor ganglia in the bowel, or to a stimulation of the inhibitory centres in the cord from which the splanchnic nerves arise. Paralysis of the sensory nerve terminations in the wall of the intestine does not occur, because after very large doses of morphine the peristaltic movements of the bowel become very marked, and experiments pointed to the conclusion that the diminution in peristalsis was very largely due to an action of the opium in paralysing the motor ganglia in the walls of the intestinal canal. Large doses caused great increase of bowel peristalsis before general spinal tetanus was induced. The anthor thinks this is due to paralysis of the spinal cord, and consequent paralysis of the inhibitory action exerted by the splanchnic nerves. In this condition, however, the sensitiveness of the intestine to painful stimuli is much diminished. Morphine has the same action in every way, and quantitatively the activity of the opium is proportional to the amount of morphine it contains. The other alkaloids of opium have very little action on the bowel. On rabbits observations were made after exposing the bowel while the animal lay in a warm bath of saline solution. Spitzer confirms the well known experiments of Nothnagel, in which he found that irritation of the bowel with sodium chloride is not nearly so effectual in increasing peristalsis after the administration of opium or morphine. If a portion of bowel be completely isolated and the same experiment repeated, then peristalsis is not interferred with; this result is regarded as proving that in this case the opium acts on the spinal cord, and diminishes the inhibitory action of the splanchnic nerves. Spitzer, however, points out that irritation of the bowel from without with sodium chloride scarcely corresponds to physiological peristalsis or increased peristalsis after purgatives or irritation from within of the mucous membrane, as the peristalsis takes place towards the pylorus, and is very inconstant in amount. He therefore irritated the bowel by injecting into it a 15 per cent. salt solution, colored with indigo-carmine. The rate at which this solution progressd down the intestine was observed in normal animals, and was found to be two or three times slower after opium or morphine, the peristalsis being also much more gentle and regular in the latter case. Even after complete isolation of a portion of the intestinal canal from its mesenteric nerves, opium greatly diminishes the peristalsis. Opium given subcutaneously acts exactly to the same extent, and no better, than morphine subcutaneously, its activity being proportional to the amount of morphine it contains. In healthy men opium by the mouth acts somewhat more powerfully on the bowel than when given subcutaneously. The reason probably, is that the morphine is only slowly abstracted from the opium, and thus acts gently along the whole length of the bowel; it is not so quickly absorbed as pure morphine is, and in consequence does not produce so marked a general action. In diarrhœa, opium *per os*

is the most powerful—more so than opium extract or morphine subcutaneously, or morphine by the mouth. In slight intestinal pain opium by the mouth is the best treatment, as we get the desired analgesia with small doses and without constitutional effect, the local action on the bowel being probably sufficient; in very severe pain hypodermic injection of morphine is most effectual. [The author does not discuss diminution of intestinal secretion as a factor in the astringent action of opium.]—*Brit. Med. Jour.*

A COMPARISON BETWEEN SALICIN AND THE SALICYLATE OF SODIUM.

Dr. Alexander Haig has recently read a paper before the Medical and Chirurgical Society of London on the comparative merits of these two drugs in the treatment of acute articular rheumatism. He bases his comparison on the relative power of the two drugs to excrete, or to stimulate the excretion of, uric acid. He has found that the salicylate of sodium has about thirteen times the excretory potency of the other drug, and he thinks he has seen that their power to interfere with the course of the disease has been approximately identical with their liberation of uric acid. His contention is that all those plans of treatment of acute rheumatism that have proved beneficial have been so in an exact proportion to their uric acid secerning power. According to Dr. Haig's reasoning, acute rheumatism is caused by the presence of uric acid, primarily, in the blood and that being driven thence by a high acidity, it is precipitated in the joints, and that this precipitation of the acid, together with the fact of the non-destruction of the acid furnish us with the most manageable theory as to the inflammatory processes and pyrexia of the malady. The rise of temperature adds to the acidity and the precipitation of acid in the joints is more complete than in gout. There may be other causes besides pyrexia that will increase the acidity, such as suppressed perspiration and chilling, tonsillitis and other local inflammations, and the ingestion of acids and acid-forming foods, all of which are predisposing causes for rheumatic attacks. He also holds that the high arterial tension at the end of an attack is an indication of an excessive proportion of uric acid in the blood, and that, therefore, any cause that increases the acidity at that time tends to bring on a reprecipitation of the acid and a relapse.—*Jour. Amer. Med. Assoc.*

OFFICIAL REPORT OF THE RESULTS OF KOCH'S TREATMENT.

The official report on the results of Koch's treatment in Prussian hospitals has been published in *Klinisches Jahrbuch*, in which it is stated that out of a total number of 1,061 patients treated for tuberculosis of internal organs 13 were cured, 194 improved, 171 substantially improved, 589 unimproved, and 46 died. In external tuberculosis (lupus, scrofula, tubercular joints, etc.) 708 cases were treated; of these 15 were cured, 237 improved, 148 substantially improved, 298 unimproved, and 9 died.

We must confess that this report, which seems to have been made in all candor, is not at all encouraging. Under our old methods of treatment we can obtain some cures and many improvements. The new method does not seem to have accomplished very much more.=*Atlanta Med. Surg. Jour.*

THE THERAPEUTIC VALUE OF VINEGAR

In speaking of the therapeutic value of vinegar, Dr. S. J. Bumstead, of Decatur, Ill., says:

"I trust that a sneer will not curl the lip of him who first glances at the title of this article. But I must admit that the remedy is dreadfully common-place for these days of advanced therapeutics, yet if the reader will but control his prejudice for a few moments, while I point out a few uses for this remedy to be found in every household, I am sure he will become a convert to my good opinion of it, if he will only give it a trial.

"From time immemorial, vinegar has been used as a domestic remedy for colds and sore throats, usually with molasses or honey, and when there is almost a laryngitis with nearly constant tickling, it serves the purpose admirably, checking the tickling cough, and promoting resolution of the tracheal and pharyngeal inflammation.

"But its greatest value, in my opinion, is in cases of catarrhal croup, membranous croup and diphtheritic croup. Here I use it in the form of steam vapor, and although I usually give what I consider as suitable internal medication at the same time, were I coufined to the use of but one alone, I think I would in most instances choose the vinegar vapor. The most convenient method of administering it is by placing the vinegar—if not too strong, using it undiluted—in an ordinary bread-pan, to be found in every house. Then, by heating flat-irons or bricks in the stove and placing them in this pan, a great cloud of steam is generated. In this way the whole

room can soon be filled and the little sufferer draws it into his larynx and bronchial tubes with every breath he takes.

"The only difficulty I find in its use is to impress the nurses with the importance of maintaining the steam constantly. There is a disposition on the part of the attendants to keep up the steaming in a half-hearted manner. Of course, this steam is irritating to the bronohi of those who are well, but they can stand it during an emergency. With a severe case of membranous croup I have maintained the steam in the room to such a degree that it would be impossible to distinguish a person across the room. The advantage of this method of treatment over the use of any spray with an atomizer is that its operation is uninterrupted. I have seen a number of desperate cases of croup yield to this treatment, after tracheotomy seemed to present the only hope. So firmly convinced am I of its great value that I believe intubation and tracheotomy would only occasionally be necessary if it is faithfully carried out.

"A few years ago I noticed in one of our medical journals a report of some French physycians upon the virtues of acetic acid. They claimed for it germicidal properties about equal in value to that of carbolic acid. A word to the unprejudiced physician is sufficient."—*North Amer. Press.*

CAMPHORIC ACID.

Dr. H. A. Hare, writes: A man, aged thirty-five, was brought into the Hosital in the early part of January suffering from advanced phthisis with a large cavity at the left apex and with numerous smaller cavities in both lungs. There was a good deal of expectoration of purulent matter and a loose, racking cough, rapidly progressing emaciation, with that peculiar flattening of the wrist, which we so often see, so that the forearms looked like laths, and with such persistent and aggravated night-sweats that the occurrence of each sweat could be seen to increase very makedly his debility and asthenia. So severe was the effect of the sweats that I could always tell on entering the ward whether he had one the night before, and on one or two occasions I was shocked to notice what terrible changes had taken place during the past twenty-four hours. All the anti-sodorific remedies which I could think of were employed, without any avail or with only a slight decrease in the quantity of the sweat. Finally, in despair, I turned to camphoric acid and ordered that twenty grains of the drug should be administered,stirred up in a little milk or placed upon the tongue and washed down with water one hour before the time at which the sweat generally came on, namely, at one o'clock in the morning. To make a long story short, I can only add that during the remaining four weeks the drug absolutely controlled all sweating, although it was only given once in every twenty-four or torty-eight hours—thereby greatly increasing the patient's comfort and undoubtedly prolonged his life. It is also worthy of remark that this drug did not seem to decrease the other secretions, such as the saliva, or to cause the uncomfortable drying of the throat and feverishness of the skin so characteristic of full doses of belladonna.

The second case was that of a woman, aged twenty-five, suffering from pulmonary phthisis sf a more chronic form than that of the case which, I just detailed. In this case also the sweats were very annoying, producing insomnia and loss of strength, although they did not seem to be productive of as much debility as in the case of the man. In this instance. also, camphoric acid in the dose of twenty grains produced a most pleasing effect, completely controlling the sweating. I may also add that I have employed the drug in cases of nervous exhaustion and general debility accompanied with excessive sweating, with considerable success.

When we consider that the dose of twenty grains of camphoric acid is only a third of what may be given in cases where this dose fails, namely, sixty grains, it becomes evident that tne drug requires a more general trial by the profession, and that it will probably take a prominent place in the list of our materia medica. It is absolutely devoid of taste, insoluble in water, and comes in small micaceous crystals, which are soluble in alcohol. It does not produce the gastric irritation and burning produced by camphor, and in none of the cases in which I have employed it has it ever occasioned any distress or untoward symptoms.—*Med. News.*

ARISTOL IN DISEASES OF THE EYE.

Dr. James Wallace, in the *Univ. Med. Magazine*, writes: This drug has been for some time before the medical profession as an application to wounds, ulcers and other conditions in wnich iodoform has proved of value. In its physical characteristics it is superior to iodoform by its greater lightness and finer state of pulverization. In its application to the eye these qualities are of

much importance, as the mechanical irritation of small particles not sufficiently pulverized often exceeds the alterative effect which we wish to obtain. Apart from this, aristol seems to excite much less irritation than iodoform, even when finely powdered, and can be used with much greater freedom without exciting as much reactlon. The faint odor which it possesses is another point greatly in its favor, especially when used around the face.

The class of cases in which it shows its effects most markedly comprises follicular inflammation of conjunctiva, phlyctenular disease of the cornea and conjunctiva, marginal blepharitis, ulcers and after-enucleation of the eye-ball as a desiccant. In epithelioma of the eyelids, in my experience, it lessens the discharge from the ulcerating surface, but exerts no further action on the progress of the disease. In a case of lachrymal abscess, resulting in a large, sloughing ulcer, one centimetre in diameter, one week's treatment by aristol sufficod to close it entirely. In a case of enucleation of the eye-ball occurring in the practice of my colleague, Dr. de Schweinitz, aristol was dusted in the socket immediately after the operation ; on opening the lids on the second day no discharge was visible, the aristol had collected in a little heap around the conjunctival opening, and on lifting this out, the centre of the aristol was found to be quite dry.

The rapidity with which phlyctenular diseases yield to its application is very satisfactory, and as its use causes very slight irritation, there is no pain attached to its employment. The largest field for its employment is probably here. As we often desire some preparation of iodine to be exhibited internally we avoid the risk of using calomel, which is free from odor, but is liable to produce sloughing of the conjunctiva when dusted into the eye while the patient is taking an iodide, and the unpleasant odor of iodoform, which is intolerable to many persons, by employing aristol, which agrees with iodine compounds and is free from any noticeable odor.

In papillary trachoma it seemed only to aggravate the symptoms, and no beneficial results appeared to follow its use, but, on the contrary, the photophobia, lachrymation and corneal opacities increased ; this appeared to me to be due to the withholding of the proper treatment more than to any positively injurious influence of the aristol. In follicular trachoma its effect is very decided.

MEDICINE.

DISEASE OF THE CAUDA EQUINA.

Bechterew has recently met with a case in which he has diagnosed affection of the conus medullaris and the cauda equina. An abstract is given in the *Neurologisches Centralblatt*, No. 5, 1891. For some weeks before the patient came under observation he had suffered from a gradually increasing weakness in the legs, together with urinary trouble and weakness. On examination there was loss of sensibility with regard to tactile and also to painful impressions on the penis, scrotum, perineum, and gluteal region. There was also similar impairment on the inner and posterior aspects of the thighs. There was much muscular weakness, so that the patient could not walk without the help of a stick. The knee-jerk was normal, and of the superficial reflexes none were lost with the exception of the gluteal. There were incontinence of urine and obstinate constipation, although at times there was involuntary defecation. There was marked tenderness over the sacrum. The author concludes that the case is one of lesion of the conus medullaris and cauda equina, and draws attention to the correspondence of the clinical symptoms with those produced experimentally in dogs by section of the cauda equina.—*Lancet.*

ARSENICAL NEURITIS.

A good deal of attention has lately been given in America to the frequency of poisoning by arsenic, and it has been pointed out that a very much larger number of cases of this kind occur than is generally supposed. Among children especially, it is contended, the proportion of sufferers in this connection is considerable, wall papers colored with arsenical paints being the source of the poison in their cases as bearing on this matter. A remarkable statement was made at a recent meeting of the Boston Society for Medical Improvement by Dr. Putnam, who said that as the result of his own observations, he found traces of arsenic in thirty per cent. of the urines which he had examined with a view to ascertaining whether or not it was present in them. Eighty different samples were tested, and none of the patients exhibited any typical symptoms of poisoning by arsenic. The conclusion, of course, is, that a very large proportion of the general public, inasmuch as all are more or less exposed at some time or other to arsenical emanations, is un-

consciously infected. The occurrence of peripheral neuritis and paralysis as a result of this form of poisoning is established by the narration of a considerable number of instances in which it has been observed, and during the discussion referred to above, several such histories were detailed. Dr. F. C. Shattock described four cases of the kind as coming within his own experience, one of them being a choreic young woman who had been treated with large doses of arsenic, and in whom extensive arsenical neuritis and paralysis resulted. Another of these cases was that of a woman who had been supposed to suffer from rheumatism for years, but as Dr. Shattock suspected it might be due to arsenical poison, he examined the urine with the result that it was found to be largely impregnated with the metal. Testimony of a similar kind was offered by other observers, and there seems to be a very general opinion that the conclusions are fully justified facts. Dr. Putnam arrives at the following deductions in this connection:—(1) That chronic arsenic poisoning is manifested under four or five distinct forms, accordingly as the mucous membranes, the skin, the nerves, or the blood become primarily affected by the poison. (2) That one member of a household may alone be subject to the influence of the poison, others in the same dwelling remaing coincidently unaffected by it. (3) That symptoms may long outlast exposure. (4) That susceptibility to minute doses of the drug may follow poisoning. (5) That children, as a rule, can endure comparatively large quantities of arsenic, and that neuritis, though less frequent in them, does occasionally occur. (6) That elimination of the poison takes place less rapidly than has been commonly assumed.—*Med. Press.*

GRAVES'S DISEASE.

Dr. Hingston Fox read a paper before the West Kent Medico-Chirurgical Society on Graves's disease, especially with reference to cardiac condition. After speaking of the four cardinal symptoms, rapid heart, tremor, goitre and exophthalmos, any one or two of which may be absent in an undeveloped case, he dwelt on the mental condition found in severe cases. The emotional centers seem to be in unstable equilibrium, disturbed by slight influences, a condition allied to hysteria and to the effects of chronic alcoholism in woman about the climacteric. Muscular weakness and impaired nutrition, with neuralgia and the well-known eye symptoms were noted. Severe gastric crises had attended one case, the patient nearly dying from the vomiting, diarrhœa, etc., which appeared to be the effects of "bowel hurry." Dr. H. W. G. Mackenzie's theory of the pathology of the disease was adopted, the symptom being regarded as an expression of a permanent condition of the emotional nervous centers, set up in the first instance by terror or fright. Darwin's graphic description of the effects of sudden fear upon animals was alluded to, the thyroid enlargement being the only important symptom of Graves's disease which is there unrepresented. The fright may have been sudden, or a repetition of small shocks. Instances were quoted in illustration of this. This theory brings us, of course, only one step nearer to the true pathology, as regards the heart, beyond a hæmic murmur and eventually dilatation, there is not usually any sign of disorder except the rapid and irregular action. Some cases show tachycardia, others mainly irregularity; in some the condition is continuous, in others paroxysmal. The graphic record of one severe case in a lady, aged 49 years, was shown, extending over eight months. Here attacks of irregular and rapid heart action occurred at intervals of a few days or a week and lasting 24 hours or so. For treatment numerous remedies have been advocated. The author would lay stress on (1) moral and hygienic care in its widest sense; (2) improvement of nutrition, much milk, cod-liver oil, iron; (3) of drugs, belladonna in mild and early cases, iodides in later stages, pushed fearlessly to large doses, bromides in some cases; (4) locally the weak continuous current, following Dr. Samson in persevering long with its use, it should be applied to the thyroid with a large plate; Lister's cold coil also gives some promise; (5) for tracheal obstruction, tracheotomy, incision of capsule of tumour, or compression laterally in some cases, inhalation of chloroform, or lastly, division of the isthmus offers the best hope of relief.

SURGERY.

PROGRESS IN TRANSPLANTATION.

Dr. R. Haug, assistant at the Royal Surgical University-Policlinic of Munich, has published an "Experimental surgico-histological essay" in which he demonstates that the shell-membrane of a hen's egg is highly applicable to transplantation. On the strength of thorough experimental researches he makes the following statements:

The fresh shell-membrane of a hen's egg is perfectly capable of organization and therefore eminently fit for transplantation. It is only that side of the membrane which is turned towards the calcareous shell of the egg which can be used for the purpose of transplantation. It is not a mere agglutination that takes place in the case, though immigration of leucocytes from the neighboring tissues agglutination is gradually transformed into perfect assimilation. The intimate fusion of both tissues attains its climax in the appearance of an extensive vascularization. The latter causes the shell membrane to lose its specific properties and to be progressively transformed into conjunctive tissue. For this reason the membrane, as above stated, is eminently qualified to be used in all classes of granulating wounds, especially also for definite occlusion of tympanic canal.

A successful transplantation of a dog's skin on an extensive wound caused by burning has been performed by Dr. Alexander Miles, in England. This case presents a twofold interest; first, on account of the great frequency of such accidents, and then on account of the unusual therapeutic method made use of.

The left leg of a 10-year-old boy had been scalded up to the knee by accidental immersion in boiling hot, liquid cow food, and although he had succeeded in disengaging the leg immediately, it was found that the cutis had been loosened from the middle of the patella down to the articulation of the foot, the foot itself having been protected by the leather shoe. He was at first treated according to impirical methods and it was only after four weeks that a physician was called in. When the patient was admitted to the hospital, the whole lower part of the left leg was deprived of its cutis, with the exception of a small spot on the anterior side of the tibia, and the surface of ulceration was in a large proportion covered with healthy granulations, only a few necrotic fragments having remained attached between them. The latter yielded soon to the application of boracic acid compresses and after their gradual expulsion a fortnight later the whole surface of ulceration presented a healthy field of granulation, without any vestige of cicaterization. The enormous extent of the wound precluded all possibility of covering it with human skin and it was determined to use the skin of some animal. Miles selected a young, smooth-skinned dog for the operation. It was a week old and its color was black and white. After having killed it with chloroform, the whole ventral and crural portion of the skin was excised and a patch was formed consisting of the whole cutaneous tissue with the exception of the adipose layer. In the mean time the leg had been carefully cleaned and all blood had been removed from the granulations. The excised skin was divided into a number of strips, 4 inches long and ½ inch wide, and firmly pressed into the surface of ulceration, while smaller fragments of 1 square inch were used in filling up the gaps between the larger pieces. To a somewhat larger spot on the inside of the knee a piece of smooth skin from the tail of the animal was applied. Then, the whole was covered with a protective bandage, over which gauze imbibed with diluted boracic acid was added, and humidity was further maintained by a layer of gum tissue, over which finally a thick layer of sublimate-wadding and a firm bandage were applied. On the third day the bandage was renewed for the first time and, with the exception of a small fragment which was ulcerating and was removed, all other pieces were found to be firmly attached and the cicratization process beginning, as well at the edge of the large ulceration as in the center. The healing process progressed rapidly, although some particles of the large strips were ulcerating; all the smaller fragments were well attached. After 3 weeks the spots remaining bare were filled up with human skin (taken from a boy) and all were cicatrized in a short time. Six weeks after beginning of the treatment the ulceration was completely healed, but the patient was kept in bed for another fortnight and then he was allowed gradually to set the extremity in motion. When the boy was seen again, 7 months later, there was absolutely no contraction to be noticed in the cicatrice with the only exception of a very slight contraction where the caudal skin had been implanted. The color of the whole skin was uniform and very similar to the normal color, nor was there any hair or secretion to be seen; the sense of taction was not weaker than in the right leg and the temperature was the same.

In a case as the one related success depends principally on three elements: 1. The general condition of the patient; 2. the character of the process of ulceration; 3. the means employed for the purpose of accelerating the healing. In the case above stated the only favorable point in the general condition of the patient was his age. His general condition was very low the favorable result was mainly due to the method

of treatment. Although it could not be said that just a dog's skin is better approprial for transplantation than the skin of other animals, it presents at least the advantage of being always on hand and of furnishing a sufficient material for most cases. A most important element is the age of the dog. During the first days after birth the animal grows very rapidly and by transplanting a large portion of young tissue, endowed with an energetic growing force it becomes possible to cover rapidly the whole surface of ulcertion, this preventing contractions which always makes their appearance after extensive burnings, if they heal without artificial intervention.—*Deutsche Medizinal Zeitung.*

CATHETERISMUS POSTERIOR.

Under this title Dr. Goldmann (*Beitr. z. klin. Chir.*, 1891, p. 460) gives an account of a case in which no instrument could be passed up the penis into the bladder, but in which, after a suprapubic opening had been made into the bladder, a catheter was passed down into the perineum from the bladder and the stricture excised, with an excellent result. The man had suffered some years previously from gonorrhœa, and though he had had trouble with his stricture from time to time, had not suffered from permanent stoppage until some few months before he came under Dr. Goldmann's care. Another surgeon had performed suprapubic puncture, and so relieved for a time the urgent symptoms, but a severe cystitis ensued after a while, causing great pain both in the perineum and in the lower part of the abdomen, as well as some erysipelatous kind of swelling of the lower abdominal wall. Under these circumstances, as soon as he came into Hospital a fairly stiff elastic catheter was introduced through the abdominal puncture, which was by this time large enough to admit the little finger. It was, after some little trouble, manipulated along the prostatic urethra as far as the stricture, and another instrument was passed down along the urethra to meet it. The intervening stricture was then excised, and the cut ends of the urethra united by catgut. The swelling above the pubes speedily disappeared, and in about three weeks the patient was able to leave the Hospital. The plan, as the author remarks, is no new one, but instances in which it is applicable are but few. The manoeuvre in somewhat aided by pulling on the penis, and if possible hooking up the anterior wall of the bladder, as by this means the prostatic openingof the urethra is rendered more funnel-shaped, and is consequently more easily traversed by the catheter. References are given to some analogous cases, together with a full account of the different conditions to which this method is applicable, as well as the reasons which render it more likely to be attended with success now than formerly.—*Brit. Med. Jour.*

A MODIFIED SUTURE FOR INTESTINAL ANASTOMOSIS.

Sachs (*Centralblatt für Chir.*, No. 39, 1890, p. 737,) after referring to the various methods now in use, explains his modification of Senn's bone-plate method. Instead of two plates he uses one piece of bone, which he compares to a cuff-button with a hole through it. It more nearly resembles a pully wheel.

At the desired place for anastomosis the lateral surfaces of the intestinal loops are approximated by suturing serous membrane to serous membrane. A longitudinal incision is then made into each section of gut parallel to the line of suture. The bone button is then slipped in so that the line of suture with the two internal incised edges fits in the groove. The outside edges will fall into place in the other side of the groove, and a few stitches approximating serous surfaces will be found sufficient to retain the parts firmly.

The advantages claimed for this method are:

1. The intestinal lumen is not kept open long.
2. The line of incision is protected from infection by the internal ring—which also prevents closing of the incision.
3. Compression of the intestinal edges is prevented.
4. The sutures do not penetrate the whole thickness of the intestine.

The author has only used this method upon guinea-pigs. The buttons are made of decalcified beef-bone.—*Amer. Jour. Med. Science.*

GYNÆCOLOGY.

WHAT DISEASES SHOULD BE NOTIFIED AS PUERPERAL FEVER?

There can be no doubt that considerable difficulty is often experienced in deciding whether a particular case of *post-partum* illness should or should not be regarded as "puerperal fever," and notified as such to the sanitary authority. Most practitioners would rather not call an illness "puerperal fever" if they can conscientiously believe that another name is appropriate to it. On

the other hand, if they omit to report as such a case which some one else, believed by the friends to possess superior knowledge, thinks should be given that name, they lay themselves open to the charge either of incompetence or lack of frankness.

One of the conditions of a system of popular government like ours is that legislation must be in accordance with the general feeling and opinion of the time. If in advance of the time it is sure to fail in its object. In sanitary legislation the medical theories acted on must be those generally accepted; they must be in harmony with the views, not of the most recent investigators, but of the great bulk of doctors, old and young, town and country, English, Scotch, and Irish. A law based on theories not yet accepted by the bulk of those on whose judgment the carrying out of the law depends would raise an amount of opposition and misunderstanding that would go far to make it an absolute failure.

We imagine that some such reasons as the above influenced those by whose advice the term "puerperal fever" was inserted into the "Notification of Infectious Diseases Act" (1889). Just as "continued fever" was a sufficient diagnosis before typhus and typhoid fever had been differentiated, so until the last twenty years, or even more recently, more was known of puerperal fever than that it was a severe febrile disease affecting lying-in-women. Even now no other definition can be given to it. It used to be thought that all such cases were essentially alike, although they might differ in detail. One distinguished American obstetrician, we believe, still holds the view that there is a specific febrile disease affecting lying-in-women and no other persons. It was thought that puerperal fever was often epidemic. Such views as these were acted on by the late Dr. Farr, when the term "metria" was introduced as the equivalent of puerperal fever, and we presume this is the view tacitly accepted in the Act we have referred to.

The object of the Act is to enable, in the interest of the public, such precautions to be taken as shall prevent infectious disease being communicated by a patient to other persons; and abundant experience has shown that in most of the diseases named in the Act prompt action in isolation, disinfection, etc., is successful in doing this. In others the mode of propagation is so far obscure that the inquiries which notification may set going must be productive of increase in our knowledge, and therefore our power of prevention. No similar statements can be made about any of the diseases comprehended under the vague term "puerperal fever." They are not epidemic. This was proved in the most conclusive way by the late Dr. Matthews Duncan. The pupils of that eminent man can remember how, with grim humor, he used to say that when a great lady died in her confinement all the doctors said there was an epidemic; but if a poor woman in the Edinburgh Cowgate died after delivery no one thought of an epidemic then. "Puerperal fever" includes septicæmia, septic intoxication (the sapræmia of Matthews Duncan), pyæmia, phlegmonous inflammation of cellular tissue (the "erysipelas malignum internum" of Virchow), wound diphtheria or gangrene, as well as the less formidable conditions of endometritis, cellulitis, perimetritis, and fever from slight transient causes. All these are wound diseases; they are spread by want of cleanliness. If isolation be required it is isolation of those attendant on the patient, not of the patient. Cases must be very exceptional in which any good can come of the interference of the local sanitary officer; and in the few instances—likely to become fewer and fewer—in which investigation might do good public attention would be certain to be drawn to the matter, even were there no notification. Every argument for reporting deaths after childbirth applies equally to cases of febrile illness following surgical operations.

It is unfortunate that so vague a term as "puerperal fever" should have been thus legally stereotyped. But as it is so, it appears to us that the best way in which medical men can act harmoniously together for the public good—and no profession has ever been more ready to sacrifice its private interests for the public benefit—is in every case of febrile illness after delivery, not clearly arising from some cause quite independent of the process of labor, either to report the case or else to consult the medical officer of health for the district to ascertain from him in what class of cases he hopes for good results from their notification to him and to act in accordance with his advice. There is now abundant proof that such cases are very rare in the experience of those who carefully observe antiseptic precautions in their practice, and if now and then a doctor, by styling a case puerperal fever, for which he might have found a less formidable appellation, should incur the undeserved censure of some hastily-judging persons, his doing so will increase for him

the respect of others, who will understand and appreciate his desire to be perfectly candid with those who trust him and to do his duty to the public.—*British Med. Journal*, May 23, 1891.

ENDO-UTERINE THERAPEUTICS.

Dr. More Madden recently read a paper on this subject before the *Roy. Acad. Med. Ireland.* With regard to the methods of modern uterine treatment and the conditions by which this is called for, the author's observations are founded on a clinical experience extending over many years, and embracing upwards of 10,000 gynæcological cases treated in his wards or in the extern department of the Mater Misericordiæ Hospital, Dublin. Of the cases admitted into those wards during the last fifteen years, endo-uterine treatment was found necessary in 35 per cent. The two essential points in all such treatment are, first, that the orifice and cavity of the uterus, if not already suffiently dilated, should be mechanically expanded; and, secondly, that whatever application is resorted to should be brought into direct contact with the diseased endometrium. For the first purpose the slow, painful, and hazardous methods of dilatation by sponge or laminaria tents have been long abandoned by Dr. More Madden, who emyloys in their stead, the rapid cervical dilator which Messrs. Arnold have brought out in accordance with his suggestion, and which he finds more effective and quicker in its action than Hegar's or other similar dilators. The second object is especially necessary as a preliminary to endo-uterine treatment in cases of congestive hypertrophy and chronic subinvolution, in which the lining membrane of the uterus is commonly overlaid by an impervious pseudo-membranous albuminoid neoplasm evolved from the proliferating cilia of the diseased surface. Or else the endometrium, in many cases, is so thickly bathed in the tenacious morbid secretion therefrom, as effectually to protect the underlining tissues from the action of any remedial agent introduced into the uterine cavity until that pseudo-membrane and secretion are removed by the curette. For these objects Dr. More Madden recommends, first, the use of Duke's cervical curette to cleanse out the entrance to the womb; and, secondly, the employment of his own adjustable uterine curette, by which the endometrium may be thoroughly denuded, and at the same time by the hæmorrhagic discharge thus occasioned the congestion of the hyperæmic and hypertrophied organ may be most effectually relieved. In the treatment of subinvolution the author advocates the introduction, in some instances, of a small tampon saturated in a combination of tannic acid and turpentine, which he terms "tannoterebinth." This acts as an immediate stimulant and astringent on the uterine structures, and in suitable cases is allowed to remain in the cavity from twelve to twenty-four hours, unless sooner expelled from the then generally much contracted uterus. The vaginal glycerine saturated tampon commonly employed in cases of this kind, although unquestionably serviceable in many instances is messy and troublesome in its use both to patient and practitioner, and hence for some time past Dr. Madden has generally adopted the boric acid, or "dry treatment," recommended recently by Dr. Duke, and which he has found generally satisfactory as a substitute for the older method of treatment. He also strongly deprecates the employment of the ordinary syphon syringe for any endo-uterine purpose, and believes that this should be replaced by an irrigator such as the one he suggested many years ago, and which, having been since appropriated by others, without any acknowledgment, is depicted in the paper of which this is an abstract. The foregoing measures must, however, be supplemented by more active agents in those more serious cases of long standing, fundal, or corporeal endometritis and subinvolution in which the disintegrated and endo-uterine mucous membrane becomes the seat of various pathological changes, extending to the submucous structures and uticular glands, and often associated with those so-called fungosities resembling papillary epithelioma, which, if unchecked, may ultimately degenerate into that condition. In such cases it is that the cautery, actual or potential—the first in the form of igni-puncture, and the latter in the shape of the stronger caustics, acid, nitrate of mercury, fuming nitric acid, or chromic acid, etc.—may be justifiably resorted to in endo-uterine treatment. In conclusion, Dr. More Madden briefly details the result of his clinical experience of these various applications, the circumstances that indicate their use, the dangers that may attend their abuse, and the methods of their employment.

—*Lancet.*

OINTMENT FOR THE ITCH.

℞

Creolini.....gr. vijss.
Vaseline..... ʒ iss.

M. Sig. Anoint the affected parts once daily.

OBSTETRICS.

AN IMPROVED METHOD OF MANAGING THE CORD IN PROLAPSED FUNIS.

On the 3rd of March, 1890, Dr. L. T. Emery was called to attend Mrs. G. in confinement. His patient was of medium size, well nourished and a fairly vigorous woman, thirty-two years of age. She had been attended in her previous labors by Dr. Bodkin, of Brooklyn, and all three were described as having been difficult and requiring instrumental delivery.

Upon examination the cervix was found to be well dilated and the bag of waters intact (though rupturing very soon); the funis was prolapsed to quite an extent, and the head presented at and was partially engaged in the superior strait, the position being right occipito-anterior.

The pelvis was narrow—a condition most frequently existing where this accident occurs—and seemed to prevent delivery except with instrumental aid.

The patient was placed in a knee-chest position, which was somewhat exaggerated by the tilting of the mattress, preparatory to returning the cord by Prof. Thomas' method. In attaching the sponge—which had been thoroughly cleansed in boiling water—to the cord, Dr. Emery made use of the following device: A tape, one inch wide and twenty inches long, was bifurcated at each end about eight inches. Three-quarters of an inch from the point of bifurcation of one end, a button-hole slit was made in the broad part of the tape, leaving, something over two inches of broad tape intact.

The sponge was secured by tying the bifurcated ends nearest the button-hole around it, and then drawing one of these through the button-hole and again tying. The bifurcated ends of that part of the tape farthest from the button-hole were then passed around the prolapsed funis, and one end was thrust through the button-hole and the two ends tied securely and further tied around the sponge.

It is claimed for this method that the broad bearing of the tape lessens the danger of destroying the circulation between the mother and child, and that the sponge is held closely adjacent to the cord without constricting the latter nor nor slipping from either.

Passing a looy of the narrow part of the tape into the eye of a gum elastic catheter and securing by means of the stylet, and pressing forward or upward, with the catheter in my left hand and aiding and guiding the sponge with my right, the cord was passed one side of the sacral prominence, beyond the head of the child and into the uterine cavity.

Still keeping the patient in the same position he proceeded to apply the forceps. This was accomplished by reversing the procedure usual when the patient lies in a dorsal position, though still preserving the relative position of the forceps to the head of the child and the pelvis of the patient, the upper blade being passed into position first and the lower blade last. Traction was then made and the head engaged in the superior strait, when the patient was laid on her side and the delivery accomplished of a living child as in a case of ordinary forceps application.

The uterus was douched with a solution of biniodide of mercury, and the mother recovered without the occurrence of fever or any other untoward event, as the result of the treatment she had received.

CHLOROFORM IN OBSTETRICS.

Dr. J. F. Baldwin of Columbus, Ohio, in a paper read before the Ohio State Medical Society, entered a plea for the more frequent use of chloroform in obstetrics.

His obstetrical triad is as follows:

During the first stage of labor, morphia.

During the second stage of labor, chloroform.

During the third stage of labor, nothing.

Summary.—Chloroform relieves pain.

It shortens labor, usually.

It prevents shock.

It prevents nervous and physical exhaustion.

It reduces the liability to rupture of cervix and perineum.

It does not conduce, in any material degree, to post partum hæmorrhage.

It does not affect the fœtus.

It is absolutely safe when properly administered.

Contraindications.—1. Such conditions of labor as lead the obstetrician to believe that he may, at some supreme moment, require all the woman's voluntary efforts to assist him. Such conditions are very rare. 2. Fatty degeneration of the heart; though, if we accept the conclusions of the Hyderabad Commission, even this may not be a contraindication; and the disease is practically never diagnosed except post mortem.—*Memph. Med. Month.*

CASE OF SUDDEN AND UNEXPECTED DELIVERY IN THE ERECT POSTURE.

There being only a limited number of cases of sudden and unexpected delivery in the erect posture on record the following case is perhaps worthy of mention:

S. D., aged 21, who had previously, after a lingering labor, given birth to one child, was recently visiting a friend, when she felt a sensation of giddiness. She therefore left and started on her way home. Having walked fifty yards a sudden pain in the abdomen was experienced; the pain was so acute that she retired to a neighboring outhouse. She had no sooner arrived there than she gave birth to a full term male child. The child fell head foremost on to the stone floor. The fall was broken by the cord, the cord was ruptured, and no hæmorrhage occurred; the child sustained no injury, not even a bruise being apparent, and is still alive (two months after the occurrence). The mother walked back to to her friend's house, and has made a good recovery.

There had been a miscalculation of two months in this case of the probable date of parturition, and the mother had no idea of the cause of the pain until the child fell from her.

Dr. E. Hugh Snell, in *Brit. Med. Jour.*

GIANT FŒTUS; CÆSAREAN SECTION.

Dr. R. Neumer (*Centralbl. f. Gynäk.*, April 25th, 1891) describes a case where a woman, aged 40, bore a giant fœtus. She had already given birth to eleven children, and it appeared that labor occurred a month after term. The abdomen was unusually large, and as the labor made no progress turning was attempted. The child was found to be of enormous size, and could not be extracted, its pelvis sticking fast in the maternal pelvis. An attempt to disarticulate the leg, as a preliminary to evisceration, failed, as the hip could not be reached. The mother being in a critical condition, Cæsarean section was performed, but she sank shortly after the extraction of the child, The child (together with the blood which it had lost in great quantity through the attempt at amputation, so that it was almost bloodless when extracted) weighed nearly 24 pounds.—*Brit. Med. Jour.*

THE TEMPERATURE AFTER LABOR AND SO-CALLED LATE INFECTION.

Stapfer (*L' Union Medicale*, Aug. 2 and 14, 1890) believes that the most valuable index of a woman's condition in childbed is the daily morning and evening record of the temperature. He has noted that a temperature persisting slightly above normal, with a trifling evening rise, is often the precursor of the so-called late infection. A temperature of 100° or 101° may be present on the evening of the first day due to the fatigue of labor; forty-eight hours later, as the result of the milk secretion. At any time before the fifth day it may occur from fæcal intoxication, when the bowels have not been evacuated. This elevation, however, is transient. It is the persistence of a slight elevation to which he calls especial attention, and he believes that in such cases the absorbed poison may be so attenuated as to produce no other symptom for a variable length of time. In one of his cases very slight fever, continuing during three weeks, was the only morbid phenomenon of septic infection.

He believes that the thermometer can predict the occcurrence of so-called infection, such as pelvic inflammation and abscess, phlegmasia, pulmonary and visceral thromboses, cutaneous eruptions, which may occur from the seventh or twelfth day to the fifth or sixth week. When any of these complications are to occur, the temperature ranges between 99° and 101° up to the time of their occurrence, with, perhaps, an occasional temporary fall to normal. Many patients are discharged with this amount of fever unnoticed, who later return to hospital with one of the above complications fully developed. He cites several such cases, and believes it demonstrated that the poison (streptoccus pyrogenes) is either encysted and localized, or spreads by the blood giving rise to complications whose nature and gravity depend upon the number and virulence of the microbe and its secretions and the receptivity of the soil. He is convinced that in such cases the three weeks of apparent apyrexia is a veritable period of incubation, revealable by the thermometer, whose value, therefore, is exceedingly great in conditions apparently normal and physiological. In a case with intestinal paresis and considerable distension, severe pain in iliac fossa and over the uterus, anorexia and disappearance of milk secretion, he predicted that the patient was not septic and gave a favorable, and afterward justified prognostic, because the temperature during a week had remained between 97.7° and 99.1°.

Barbers will soon be compelled to use antiseptic precautions.

PÆDIATRICS.

CLOUSTON—THE NEUROSES OF DEVELOPMENT.

Traumatism is assigned by most authors as a cause for idiocy and congenital imbecility. Parents are prone to look for some accident as to the cause for such conditions, resolutely shutting their eyes to manifest hereditary weakness. While the author makes allowance for such sources of error, he believes that there are left certain cases where traumatism must be assigned as the exciting cause of the arrest of brain develpment. This is intelligible enough when there is a gross lesion of the brain, as a clot causing pressure. It is not as clear, but still must be accepted as a fact, that sometimes a fall or a blow is followed by a change in the development of certain brain functions. Traumatic idiocy is in such cases not as marked either in mental impairment or in physical expression.

Rickets, night-terrors, the febrile delirium of children at temperatures ranging from 99° to 101°, infantile eclampsia, and the hysterical affections of childhood are all classed by the author as neuroses incidental to childhood from birth to seven years. They all occur in children of neurotic heredity far more frequently than in other children. They are referable to weakness of inhibitory function and instability in the brain cortex at an era when the organ is rapidly growing and the convolutions are deepening and expanding in even greater proportion than the rest of the brain. Rickets is clearly a trophic neurosis probably due to want of sunlight sufficient to give stimulus to the central trophic nervous centres which innervate the bones and perhaps other tissues. But these exciting causes of want of light and bad city conditions of life will not, as a rule, produce rickets in the children of healthy, country-born parents. That the brain cortex is affected is evident from their common neurotic accompaniments, retardation of growth, and a tendency to precocious and unhealthy mental advancement which stops short of full mental growth.

The author agrees with Jenner and Henoch in attributing the so-called convulsions of teething far more to rickets than to dentition. The first motor sign of the instability of any brain is a tendency to convulsions during the first dentition. Many cases of developmental epilepsy will be found to have had convulsions during dentition. The same kind of unstable brain will become delirious at night even with very low febrile temperatures. Such children will take convulsions at slight attacks of indigestion.

Night-terrors, the author believes, is an affection that is really psychical, and may be considered equivalent to a convulsion occurring in the menta areas during sleep.—*Edinburgh Medical Journal*, March, April, May, 1891.

INFANTILE SPLENIC ANÆMIA .

The following are Somma's conclusions :

1. Infantile splenic anæmia, or splenic pseudo-leukæmia is a common disease of childhood, more common than has usually beed supposed. Its origin may date from the very beginning of life.

2. Its introduction into modern pathology is largely due to the investigations of Cardarelli and Luigi Somma.

3. It is characterized by the well-known form of progressive gravè anæmia, associated with chronic hypertrophy of the spleen which, with its special characters, has no relation with other morbid conditions.

4. Clinically it is manifested by a complex train of pathognomonic and accidental phenomena. The first or necessary ones are unfailing in every nosographic form of the disease, the second may be present but are not always clearly distinguishable.

5. In its circle of evolution three periods are usually to be observed, being periods of beginning, development, and cachexia.

6. There are three principal forms of the disease, the chronic febrile form, the chronic afebrile form, and the chronic form with recurring attacks of fever.

7. The true nature of the process is not yet clearly understood, but from such investigations as have been made it is supposed to be due to a micro-organism which is introduced into the system and finds its medium of development within the spleen. Having passed into the circulation of this organ, it determines the many anatomical and functional changes in the organ which mark the clinical phenomena of the disease.

8. It has a chronic cause which varies from eight months to three years, and there are also cases which continue when adult life has been reached.

9. The disease may terminate in three ways,—in death, which is the most frequent way; in a prolonged chronic state, which continues into adult life; and in complete cure.

10. The prognosis should be a most guarded one, and one should aim chiefly to

to modify the symptoms. The propriety of splenectomy is not yet decided upon. Such a grave operation is of course to be avoided if possible.

NUCLEATED RED BLOOD-CORPUSCLES IN THE ANÆMIA OF CHILDREN.

Dr. John Loos, of the Pædiatric Clinic of Prof. Escheric. in Graz, reports as follows to the *Wien. Klin. Wochenschr.* No. 2. 1891. The author found the nucleated red corpuscle in thirty-one cases during life. The cases were for the most part of children under two years of age, only four ranging between two and thirteen years. In one instance it was a child with trismus; in another a boy of five years afflicted with pulmonary tuberculosis (the only case of tuberculosis in which this corpuscle was found.) Five other cases were children suffering from chlorosis, syphilis, or purpura. A great majority of the cases presented a symptomatology which clearly corresponded to the splenic anæmia of Henoch and the infantile pseudo-leucæmic anæmia of Jaksch. The children are extremely pale, their skins glossy, but they are fairly nourished. The peripheral lymph nodes of the axilla, the neck, the inguinal region are greatly enlarged; and the internal glands are enlarged and soft, not indurated. A splenic tumor was universally present. The bones were rachitic. In addition to the nucleated corpuscles, the blood contained a diminished amount of coloring matter, a reduction of the amount of hæmaglobin, and more or less pronounced leucocytosis.

The character and the etiology of the disease are as yet obscure. The prognosis is absolutely unfavoroble. A reduction of the spleen-tumor, as described by Henoch, was not observed in any of Loos' cases. The children, when they did not succumb to the anæmia itself, fell a ready prey to such intercurrent diseases as pneumonia.

HYGIENE.

EPIDEMIC RELATIONS OF DIPHTHERIA IN NORWAY.

Axel Johannessen, of Christiania, reviews the various epidemics of diphtheria which have occurred in Norway, and makes some remarks upon diphtheria and croup. He concludes that the largest part of cases of croup which occur both before and after the great epidemics of diphtheria are of diphtheretic natnre.

An interesting point is developed regarding the mode of invasion of the disease and the parts of the country affected. These, in different epidemics, have been to a certain extent the same. Density of population and such means of conveyance as railways and streets do not appear to play any part in the spread of the disease. The coast districts have one-third more cases of diptheria than the inland districts, and the fishing districts of the coast are the most affected. At Dorschfang from 25,000 to 30,000 men collect in 5000 huts, being huddled together under bad hygienic conditions. At Tromsö-Stift diphtheria generally shows the highest number of cases of the disease—as many as 105 per thousand of population. Moreover, statistics also show that those districts whence the fishermen are sent out and return again are invaded by the disease in proportion to the number of fishermen, a condition which is true of other epidemic diseases, especially typhoid fever.

In Norway and Sweden the morbidity in the cities is, on the whole, greater than that of the country; but usually epidemics in cities develop more slowly, and rarely reach an excessive height; whereas, it is much more frequent for an epidemic in the country to rise rapidly to a high ratio between diseases and population. The mortality is absolutely greater in the cities; on the other hand, the percentage of dead of those medically treated in the country districts is considerably higher. This circumstance seems to be due to the fact that throat diphtheria is, in the country, more fatal than in the cities, where, on the other hand, a decidedly greater number of victims is furnished by diphtheria of the larynx.

The great variations in the disease curves are not primarily dependent upon meteorological influences.—*Deutsche med. Wochenschrift*, March 19, 1891.

BARBERS AND CONTAGIOUS DISEASES.

Antisepsis is now the law of the land in Germany, and it is not long since some violation of its rather changeable precepts was punished with imprisonment. The victim in that case was a midwife, but medical men have, we believe, been threatened with similar penalties. Barbers are, in some parts of Germany, subject to strict rules as to the disinfection of their razors, curling irons, etc. That enactments of this kind might with advantage be made general, not only in the Fatherland, but in other countries, is shown by a case recently reported to

the Berlin Dermatological Society by Dr. Oesterreicher. A man, aged 30, presented himself, with a papulo-squamous eruption, enlargement of the lymphatic glands in the neck and elsewhere, mucous patches on the soft palate and other secondary syphilitic lesions. The patient denied all knowledge of any primary infection, nor did the most minute examination of the genitals reveal any suspicious appearance. On the left side of the face, however, there was an area of cicatricial thickening exactly resembling a healed hard chancre; this, the man stated, was a result of a cut received some time before whilst in the hands of the barber. Dr. Oesterreicher had no doubt that the disease had been inoculated in that way. In 1884, Dr. Löbl, of Vienna, reported a number of cases in which sycosis, herpes tonsurans, and alopecia furfuracea, had been communicated by dirty razors and other implements of the hairdresser's *armamentarium*, and urged the desirability of making it compulsory for these artists always to disinfect their instruments before use.—*Brit. Med. Jour.*

THE IDENTIFICATION AND STAINING OF TUBERCLE BACILLI.

Mr. Baker, High Holborn, London, has had the happy idea of fitting out a small box with all the requisites for the prompt staining and identification of the tubercle bacillus. Although the collapse of Koch's treatment has lessened the interest which this particular microbe excited a few months since, it must always be a great assistance in the diagnosis of doubtful cases to be enabled to subject the sputum to bacteriological investigation. The box, which measures 8 by 6 by 4 inches, contains an adequate supply of fuchsin and methyl blue (the latter for counter staining), with acid solution for decolorising, and balsam for mounting purposes, in addition to a spirit lamp, watch and cover glasses, slides, etc. Full but simple and explicit directions are pasted on the inside of the lid which, in our hands, proved perfectly workable and satisfactory.—*Med. Press.*

MEDICAL CHEMISTRY.

ON THE PRESENCE OF URETHANE IN THE URINE IN BRIGHT'S DISEASE.

In examinations of large quantities of albuminous urine, Dr. Rademaker has always met with a crystalline organic compound that was soluble in water, ether, chloroform, alcohol, and benzol, and almost insoluble in petroleum ether. This organic compound differs from all the constituents of normal urine. This compound can be readily isolated by the following process: Evaporate several litres of albuminous urine to dryness on a water bath, and extract the residue with 98 per cent. alcohol and filter. Allow the alcoholic solution to evaporate at a low temperature. Treat the oily residue with dilute sulphuric acid and extract with ether; allow the ether to evaporate spontaneously. The residue contains urethane in an impure state. Dissolve the residue in distilled water, and filter from the oily matter. Treat the filtrate with carbonate of potash to an alkaline reaction and again extract with ether, the ether allowed to evaporate and the residue placed in an exsiccator over sulphuric acid, when gradually crystals in the form of plates separate. These crystals are dissolved in distilled water, and the solution treated with a solution of subacetate of lead, the excess of lead being removed with carbonate of soda and again extracted with ether. If now this ethereal solution is allowed to evaporate spontaneously, it leaves urethane in a pure state. If a solution of these crystals is boiled with NaOH, ammonia is evolved, showing the presence of nitrogen. If this alkaline solution is treated with an acid CO_2 is evolved.

ANALYSIS OF SUBSTANCE DRIED IN AN EXSICCATOR OVER SULPHURIC ACID.

0.1047 gram of substance gave 0.1537 of CO_2 and 0.0736 H_2O,

Which equals..... .....40.00 per cent. C.
and..... 7.83 " " H.
Nitrogen, by Kyeldahl's process.....14.90 " " N.
Urethane ($C_3H_7NO_2$).

Requires	*Found.*
C = 40 44 per cent.;	C = 40.00 per cent.
H = 7.86 " "	H = 7.83 " "
N = 15.70 " "	N = 14.90 " "

If a little of this substance was dissolved in distilled water, and the solution treated with a solution of carbonate of soda and a few scales of iodine and then heated, the smell of iodoform was produced. This solution, upon cooling, deposited crystals of iodoform. If part of the crystals are treated with solution of ammonia, heated in a closed tube, neutralized with dilute sulphuric acid, and then submitted to distillate gave a distinct reaction for alcohol, with the iodoform test and chromic acid reaction, which is explained by the following equation:

Urethane. Ammonia. Urea. Alcohol.
$C_3H_7NO_2 + NH_3 = CH_4N_2O + C_2H_5OH.$

These reactions, and the ultimate analysis

conclusively prove that this substance is identical with urethane.

As urethane is formed by the action of alcohol upon urea when heated (as the following equation will explain):

Urea. *Alcohol.* *Urethane* *Ammonia.*

$CH_4N_2O + C_2H_5OH = C_3H_7NO_2 + NH_3$

Dr. R. thought it best to treat normal urine the same way that he had treated the albuminous urine, but not a trace of urethane was formed; however, if the alcoholic extract of normal urine was evaporated at a high temperature, urethane was always formed.

Urethane is a powerful narcotic, and Dr. R. advances theory that to this substance the so-called "uræmic poisoning" in Bright's disease is due.—*American Pract. and News.*

News and Miscellany.

THE FIVE YEARS' CURRICULUM.

The difficulties which will occur to everyone as to the best means of utilizing the extended period of education of the medical student are strikingly shown in the report of the Committee of Management of the Examining Board in England which has just been issued, and which will come on for discussion at the next meetings of the respective authorities of the two colleges. The committees are generally agreed on the subjects of the curriculum, but differ as to the number of examinations which should be held during the five years of study. The six members have three different views as to this point, and so three schemes will be submitted to the two colleges for their decision. Under the first scheme, recommended by the medical representatives of the Committee of Management, there would be three examinations, as at present: the first, after six months' attendance at a medical school, would embrace chemistry and physics, pharmacy, elementary human anatomy and elementary biology; the second, at the expiration of the second winter session, would include anatomy and physiology; the final, after the expiration of three winter and three summer sessions from the date of the candidate passing the second examination, would deal with medicine, surgery, and midwifery. During this last period the student must have received clinical instruction in fevers and small-pox. The scheme practically alters but very little the present arrangement, except that elementary biology is added to the first examination, that courses of lectures on public health and therapeutics must also be attended, and that a special paper on forensic medicine, public health, and general therapeutics forms part of the examination. The second scheme, presented by two of the surgical representatives, is similar, so far as the first and second examinations are concerned, but the third examination is to be passed at the expiration of two years from the date of passing the second examination, and consists of medicine, surgery, and midwifery, as at present; but the latter subject may be taken at the fourth examination if the candidate elect to do so. Under this scheme the final year is to be devoted simply to an extra year's attendance at a Hospital (to include attendance at a fever Hospital) and a fourth or final examination in clinical medicine and surgery must then be passed. In the third scheme drawn up by the remaining surgical members of the committee the student is required to pass a series of annual examinations, the first in chemistry and physics, elementary human anatomy, and elementary biology; the second in anatomy, physiology, and elementary pathological anatomy; the third in anatomy, including histology, physiology, pathological anatomy, pharmacy, and elementary knowledge of drugs; the fourth in the principles of medicine and surgery and in pathology; whilst the fifth, or final, embraces the practice of medicine, the practice of surgery, the practice of midwifery and diseases of women, and the elements of forensic medicine and of public health. Doubtless there will be many differences of opinion as to the relative value of the schemes, but at present we would only point out that they all agree in introducing into the curriculum the subject of elementary biology; that ophthalmology, diseases of children, and mental diseases are unmentioned; that there is no provision made for spending the fifth year with a practitioner as a pupil, but the extra year practically becomes merely an additional year of ordinary Hospital study and hospital work, except that a certain unspecified time is to be given to fevers. We question if these arrangements are such as were anticipated by the General Medical Council when they passed the resolution insisting on this fifth year of medical education.—*Lancet.*

A TEN YEAR'S CURRICULUM.

The course of medical study at the Buddhists' Lama University, in Thibet, is ten years. The first four years are devoted to language and theology, the eighth year to astrology, and physiology succeeds only in the last two years.—*Ex.*

HARVARD MEDICAL SCHOOL FELLOWSHIPS.

Three scholarships of $5,000 each have been established through the gift of William S. Bullard.

The exhibition of bacteriological apparatus at the coming International Congress of Hygiene, promises to be exceptionably fine.

A HOSPITAL FOR INFECTIOUS DISEASES IN TURIN.

The King of Italy gave 160,000 lire ($32,000) on his last birthday to the city of Turin to assist in the erection of a hospital for contagious diseases.

Dr. James N. Martin has been appointed Professor of Obstetrics and Diseases of Women at the University of Michigan. He filled the chair since Prof. Dunster's death.

Crystallized Chloroform.—The Swiss physicist, Raoul Pictet, has discovered a method of preparing crystallized chloroform for commercial use. Kept in this form it cannot undergo any changes or contain any impurities.

PYOKTANIN STAINS REMOVABLE.

The blue stains on the hands, etc., from Pyoktanin, *are readily removable* by lathering with common soap (rubbing-in well,) and then washing (or, if need be, brushing) off with alcohol, or with *any strong* alcoholic liquor.—*Mercks Bulletin.*

MEDICAL DIPLOMAS IN KENTUCKY.

Resolved that the Secretary be instructed to place upon the list of medical colleges whose diplomas are to be certified and endorsed for registration under the laws of this State, only such colleges as shall, after the session of 1891–2, exact of matriculates and graduates a minimum of requirements not less than those required by the American Medical College Association.

THE ASSOCIATION OF GERMAN ALIENISTS

The Association of German Alienists will meet this year at Weimar, on September 18th and 19th. The following questions among others will be discussed: Responsibility and Criminality, Drunkenness in Relation to Responsibility, Prophylaxis of Tuberculosis in Lunatic Asylums, the Present Condition of the Aphasia Questions, Therapeutic Employment of Hypnosis in Lunatic Asylums, Care of Epileptics.

KOCH INSTITUTE IN BERLIN.

The clinical section of the new Institute will be completed within a few weeks. There are seven parlors, having accommodations for 108 patients, and two parlors for physicians and attendants. Prof. Ludwig Brieger, will probably be at the head of the clinical department, and Dr. Richard Pfleger will have charge of the scientific department. Koch, it is said, will receive a salary of 20,000 marks ($5,000,) and Drs. Brieger and Pfleger each 6,000 marks ($1,500.)

SOCIETY MEETINGS.

The American Association of Obstetricians and Gynecologists will hold its fourth annual meetiug, at the New York Academy of Medicine, 17 West Forty-third street, in the City of New York, Thursday, Friday, and Saturday, September 17, 18 and 19, 1891, under the presidency of Dr. Adam H. Wright, of Toronto. All physicians interested in the discusssion of subjects pertaining to Abdominal Surgery, Obstetrics, and Gynecology are invited to attend without further formal notice. By order of the Executive Council.

William Warren Potter, M. D.,
Secretary.

COMPARATIVE COST OF MEDICAL EDUCATION IN ENGLAND AND AMERICA.

According to the estimate of the Secretary of the Illinois Board of Health, the average fees for the eleven London schools are, exclusive of the examination fees, £118, 5s.; for the provincial schools. £98. In addition each student has to pay from 10s. to £3 matriculation to one of the degree-granting bodies; from £1 to £15 for 1st examination; from £1 to £10 for the 2d; from £2 to £15 for the first degree or qualification examination. In some of the colleges in the United Sates all the fees do not amount to $300, and in at least one the whole course of study and the diploma can be had for $138.

The first annual meeting of the U. S. Medical Practitioners' Protective Alliance was held at Baltimore, June 11th and 12th. The society was incorporated under the laws

of Maryland. Officers for the ensuing year were elected, and such other business transacted as was necessary to establish the Alliance on a basis of permanence. As usual in meetings for organization, comparatively little work could be done outside the regular routine in such cases. Addresses were delivered by the officers, and several papers on alliance work in general were read and discussed. The proceedings will be published in a few weeks.

THE BRITISH MEDICAL ASSOCIATION.

The fifty-ninth annual meeting of the Association will be held at Bournemouth on July 28th and three following days. The President-elect is Dr. J. R. Thomson, consulting physician to the Royal Victoria Hospital, Bournemouth. Addresses in Medicine, in Surgery, and in Public Medicine will be given by Dr. Lauder Brunton, by Dr. John Chiene, and by Dr. E. C. Seaton respectively. The scientific business will be conducted in nine sections, presided over by distinguished members of the profession. The exhibits at the animal museum will be arranged in five sections. At the dinner of the Metropolitan Counties Branch of the Association the treasurer of the Association, Mr. Butlin, expressed the hope that the annual meeting would be held in London in the year 1894.

CANADIAN MEDICAL CERTIFICATES.

The College of Physicians and Surgeons of the Province of Quebec has, with the earnest coöperation of the universities, been endeavoring to get its certificates recognized in Great Britain on the principle of reciprocity. The terms of the Act of 1886 require, however, that before foreign or colonial diplomas can be recognized in England they must be recognized in the country in which they are obtained. Qualifications gained in Quebec are only recognized in the province of Quebec. Canada herself in other provinces does not recognize the certificates of the province of Quebec. In great questions this partial application of legislation provincialises and belittles; and it will have to be modified if countries with strong central Governments are to recognize those where local restrictions prevail.

THE AMERICAN SOCIETY OF MICROSCOPISTS.

This association, now in the thirteenth year of its existence will hold its fourteenth annual meeting in Washington. D. C., August 10, and continue in session five days. Its roll of active members contains about three hundred and fifty names, embracing very nearly every person in the United States who is at all prominent as a microscopist. Its membership consists of two distinct classes, viz.: professional men and students of the natural sciences, who use the microscope in their daily avocations as an instrument of research, diagnosis, or precision; and amateurs, or those who find pleasure and profit in the revelations of the instrument. Many of the latter class, from having chosen special lines of study and investigation, have acquired high reputations in their respective departments of microscopical research. In its earlier years this class predominated in the membership of the society, but at present the professional element is largely in excess.

The qualifications for membership are very simple. The applicant must be a respectable person socially, and interested in the use of the microscope.

A MEDICAL TEMPERANCE CONGRESS.

The managers of the National Prohibition Park, of Staten Island, invite representative medical men from all localities in the United States and the Dominion of Canada to meet in conference on the 15th and 16th of July in the great Auditorium Building of the Park. The chief object of the meeting is to be the comparison of views on the relationship of physiology and alcohol. Among the questions to be discussed will be the following: "What are the Hereditary Effects of Drunkenness?" "Are there any Hereditary Effects that Follow Moderate Drinking?" "To what Diseases are Inebriates More Especially Exposed?" "Is Alcohol a Poison?" "Is Alcohol in any Sense a Food?" "What are the Proper Uses of Alcohol as a Medicine?" "Is there Danger of Producing the Drink Habit from the Prescribing of Alcoholic Medicines?" "How Large a Percentage of Deaths May be Attributed, Directly or Indirectly, to the Use of Strong Drink?" "Should Alcoholic Liquors Ever be Used Except Under the Direction of a Medical Adviser?" It is announced that, at this Conference, all views will be given an impartial hearing, and no restraint will be placed upon the discussion save that of the time limit.

HOW TO LOOSEN GLASS STOPPERS.

The *Pottery & Glassware Rep.* states that some one of the following methods is certain to prove effective:

1. Hold the bottle or decanter firmly in the hand or between the knees, and gently tap the stopper on alternate sides, using for the purpose a small piece of wood, and directing the strokes upward.

2. Plunge the neck of the vessel in hot water, taking care that the water is not hot enough to split the glass. If the stopper is still fixed, use the first method.

3. Pass a piece of lint around the neck of the bottle, which must be held fast while two persons draw the lint backwards and forwards.

4. Warm the neck of the vessel before the fire and when it is nearly hot the stopper can be removed.

5. Put a few drops of oil around the stopper where it enters the glass vessel which may then be warmed before the fire. Then apply process No. 1. If the stopper still continues immovable, repeat the above process until it gives way, which it is almost sure to do in the end.

6. Take a steel pin or needle and run it round the top of the stopper in the angle formed by it and the bottle.. Then hold the vessel in your left hand and give it a steady twist toward you with the right, and it will very soon be effectual. If this does not succeed, try process No. 5 which will be facilitated by it.

FOREIGN BODIES SWALLOWED BY A STOWAWAY.

On Thursday, May 21st, the body of an Arab, found dead on one of the ships in the Albert Dock, was taken to the Seamen's Hospital, name unknown. A necropsy was ordered by the coroner, and made by Dr. F. Croucher, house surgeon to the branch hospital. There were no signs of disease in the brain or the chest, except a few old adhesions in the left pleural cavity. The gall-bladder was very distended and full. Three small ulcers existed on the anterior coat of the stomach. Several patches of inflammation were found in the small intestine. In the cæcum were found twenty trousers buttons, three cog-wheels (apparently out of a watch, two of them 1 in. in diameter—these were doubled), one 2 in. steel screw bent double and one 1 in. screw, six pieces of a lock (the biggest piece was 1½ in. long and ½ in. broad), a circular piece of brass (1¾ in. in diameter folded into four), several pieces of iron wire (four were 1½ in. in length), brass, and lead, and two key tallies on a ring, one inch in length. In the ascending colon, about five inches from the cæcum, were found a piece of steel wire one-eighth of an inch in diameter, and three inches and half in length, bent double, and one small cog-wheel. The weight of these bodies together amounted almost exactly to half a pound. The body was much emaciated; no subcutaneous fat was present in chest or abdominal walls, or any fat round the kidneys. The deceased was quite unknown; no particulars could be discovered by the police employed to obtain evidence for the purpose of the inquest. There was no perforation of intestines, or any sign of disease in the colon.—*Lancet.*

A DUBLIN DOCTOR'S DOGGERELS.

This is a little book of rhymes, originally printed for private circulation, and now, as the author says "saved from the waste paper basket." It would have been a great pity if they had been consigned to that ignominious receptacle for they are irresistibly funny and marked by much cleverness, both of idea and of expression. The medical poems, or rather we should call them skits, are especially amusing. Here is a specimen:—

Should you suffer from lumbago,
Live on nothing else but sago,
Rub the lower part of spine
With the strongest turpentine,
Try the treatment used by quacks,
Drop on melting sealing wax.
If there still is no relief
Try a six-inch mustard leaf,
Take a needle and a syringe
Inject ether every twinge,
If there's no relief from pain
Try a Pulvermacher's chain.
Then rub smartly with sand paper,
It will make you dance and caper,
Then, while resting from your toil,
Smear the part with "Jacob's Oil."
If all fail, try belladonna,
It will cure you, 'pon my honor.

Here is another:—

Doctors wonder, and well they may,
How the profession can possibly pay,
Hundreds still will crowd the ranks,
Giving advice without fees or thanks.
Too many Hospitals, far too many,
Giving their help without charging a penny,

Hundreds who could afford a fee,
Get at a Dispensary treatment free.
The profession allows it, what's the use
Of alluding at all to such an abuse?
The struggling practitioners doing their duty,
While quacks and bone-setters live on the booty.

It is clear that a humorist and rhymer of the first water has been lost to the laughter-loving public in the Dublin doctor.—*Medical Press.*

THE INTER-CONTINENTAL AMERICAN MEDICAL CONGRESS.

OFFICE OF THE PERMANENT SECRETARY OF THE AMERICAN MEDICAL ASSOCIATION.

Philadelphia, Jnne 4th, 1891.

To the Medical Profession of the Western Hemisphere:

At the meeting of the American Medical Association, held at Washington, May 5th, 1891, Dr. Charles A. L. Reed, of Cincinnati, introduced the following:

Resolved, That the Ameriean Medical Association hereby extends a cordial invitation to the Medical Profession of the Western Hemisphere, to assemble in the United States in an Inter-Continental American Medical Congress.

Resolved, That the Committee on Nominations be and is hereby instructed to nominate one member for each State and Territory, and one each from the Army, Navy, and Marine Hospital Service, who shall constitute a committee, which is hereby instructed to effect a permanent organization of the proposed Inter-Continental American Medical Congress, and to determine the time and place at which the same shall be held.

The resolutions were seconded by Dr. Wm. H. Pancost and others, and unanimously adopted.

Pursuant to the foregoing the following Committee was nominated and elected:

Alabama—R. F. Saunders.
Arizona—Henry A. Hughes.
Arkansas—Ed. Bentley.
California—W. R. Cluness.
Colorado—Wm. A. Campbell.
Connecticut—C. A. Lindsley.
Delaware—C. H. Richards.
District of Columbia—D. W. Prentiss.
Florida—C. R. Oglesby.
Georgia—J. McFadden Gasten.
Idaho—Geo. P. Haley.
Illinois—N. S. Davis.
Indiana—A. M. Owen.
Iowa—B. H. Criley.
Kansas—J. E. Minney.
Kentucky—J. N. McCormack.
Louisiana—Stanford E. Chaille.
Maine—Hampton E. Hill,
Maryland—Geo. H. Rohe.
Massachusetts—Augustus P. Clarke.
Michigan—C. Henri Leonard.
Minnesota—P. H. Millard.
Mississippi—W. F. Kendell.
Missouri—I. N. Love.
Montana—Thos. J. Murray.
Nebraska—R. C. Moore.
Nevada—P. J. Aiken.
New Hampshire—Irving J. Watson.
New Jersey—E. J. Marsh.
New Mexico—C. E. Winslow.
New York—John Cronyn.
North Carolina—H. Longstreet Taylor.
North Dakota—E. M. Darrow.
Ohio—Charles A. L. Reed.
Oregon—Wm. Boys.
Pennsylvania—Wm. Pepper.
Rhode Island—Geo. L. Collins.
South Carolina—R. A. Kinloch.
South Dakota—J. W. Freeman.
Tennessee—J. R. Buist.
Texas—J. W. Carhart.
Utah—F. S. Bascom.
Vermont—H. H. Holton.
Virginia—J. S. Wellford.
Washington—J. M. Morgan.
West Virginia—J. H. Brownfield.
Wisconsin—J. T. Reeve.
Wyoming—J. H. Finfrock.
U. S. A.—
U. S. N.—A. L. Gihon.
U. S. M. H. S—J. B. Hamilton.

WM. T. BRIGGS, M. D., *President.*
WM. B. ATKINSON, M. D., *Per. Sec.*

THE INTER-CONTINENTAL AMERICAN MEDICAL CONGRESS.

OFFICE OF THE CHAIRMAN OF THE COMMITTEE ON PERMANENT ORGANIZATION.

Cincinnati, June 6th, 1891.

The Committee appointed by the American Medical Association to effect a permanent organization of the Inter-Continental American Medical Congress, met at "The Arlington," Washington, May 7, 1891. The following officers were elected: Charles A. L. Reed, M. D., Cincinnati, O., Chairman; J. W. Carhart, M. D., Lampasas, Texas, Secretary; I. N. Love, M. D., St. Louis, Mo., Treasurer.

On motion, the officers were appointed a special Committtee to draft a Constitution, and report the same at an adjourned meeting of the general Committee, to be held at St. Louis, Mo., Wednesday, October 14, 1891, when the time and place of meeting of the Congress will be decided, and permanent officers be elected.

CHARLES A. L. REED, M. D., *Chairman.*
J. W. CARHART, M. D., *Secretary.*

PROFESSOR ANGERER, of Munich, has been appointed Professor of Surgery in the University of that City, to succeed Nussbaum.

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Clinical Lecture.

CHRONIC NEPHRITIS.

BY JAMES M. ANDERS, M. D.,

PROF. OF HYGIENE AND CLINICAL MEDICINE AT THE MEDICO CHIRURGICAL COLLEGE OF PHILA.

Male, thirty-three years of age, single, employed in gas works, working near the fire, becoming heated and cooling off suddenly. This is one form of exposure and is to be remembered. Family history negative Three years ago he had typho-malarial fever. Soon after, he began to be troubled with rheumatism, affecting only the left knee, never migrating from one part to another. About six months ago the pain suddenly ceased and almost immediately the other leg began to swell, first at the knee, then above the knee, and later, from the knee down to the foot. One month ago he began to swell in the abdomen, as well. From the time he first noticed this œdema until now, he has felt as though—were it not for the dropsical effusion and symptoms of dyspepsia—he were perfectly well.

Notice that this man has a peculiar pallor of the skin, and if you were to feel of it, as I do, you would notice it is somewhat harsh. When you pinch up the skin of a person suffering from kidney trouble, especially chronic diffuse nephritis, you will find that when you allow it to fly back, it will do so only gradually as compared with normal skin ; in other words, the skin has lost some of its natural elasticity, besides becoming dry and harsh. Now, I told you that the man's heart was perfectly sound, so far as I could determine. His urine has been examined and found to contain considerable albumen and a few granular and epithelial casts ; specific gravity, 1,025. There is no history, such as we sometimes get, in cases of this kind, and such as you will frequently meet with, where a person is seized with a rigor, followed by swelling such as this, with perhaps vomiting, severe headache, or other well-marked nervous symptoms ; in short, all the symptoms of acute diffuse nephritis gradually merging into the chronic form of the disease. This accute form of Bright's disease is frequently caused by exposure. Where the trouble come on insidiously, as in this instance, you have chronic nephritis, so-called, from the beginning. The causes of this variety are syphilis, which this man denies ; alcoholism is also denied ; and gout or rheumatism, from which latter disease, however, he has suffered.

This brings me to discuss briefly the different forms of nephritis. The subject is in a state of great confusion, even among leading writers. What one describes as chronic parenchymatous, another will call chronic diffuse nephritis, and so on. Let us bear in mind that we have cases of nephritis in which only the epithelial lining of the tubes is affected ; these constitute acute and chronic parenchymatous nephritis. Where the disease is ushered in by chill, fever, and bloody urine with large amount of albumen and casts, you have to deal, as a rule, with acute diffuse nephritis. Additionally, we have the most common form of the disease, namely, chronic diffuse nephritis.

There is one element in this man's case which has not as yet been investigated. He has apparently a great deal of ascites. The man denies that he has ever been, even a steady alcohol drinker. We know that cirrhotic conditions of the liver frequently are associated with cases of chronic nephritis. We have, in this man's case, as you will recall, great œdema of one limb, not so much of the other, and great distension of the abdomen. Now, that being the case, the liver ought to be investigated to see whether it is in a state of cirrhosis. Cirrhosis, as you know, is usually divided into two stages, first, that of hyperplasia of connective tissue, causing enlargment, and, secondly, the stage of contraction, in which the organ undergoes

great diminution in size. The normal liver dullness extends above to the 4th interspace or 5th ribs; sometimes percussion resonance extends lower down, but this you must remember is on inspiration. To make a long story short, let us see if this man's liver is enlarged or diminished. We have on the surface one evidence of cirrhosis, namely, enlargement of the superficial abdominal veins. We begin above and find the ribs, 1st, 2d, 3d, 4th, 5th. On the man breathing out, we find that liver dullness begins at the 5th rib. Now, you may not get the lower line of dullness, where you have so much effusion as you have here, by keeping the patient on his back, but by getting him to turn on his left side, any fluid in the peritoneal sac will naturally gravitate toward the left side of the body and give me an opportunity of ascertaining how far down the liver dullness extends. By so doing you notice that below the costal border I get tympanitic percussion resonance, since no liquid is there now. I also get tympanitic percussion resonance one inch higher up than the costal border. We find that this man's liver has undergone considerable contraction. You may remember that I told you some time since that in cirrhosis of the liver in their subjects, we can sometimes feel the under surface of the organ by placing the palm of the hand over the chest, with the fingers extending down over the costal border, making deep palpation in the backward and upward direction. By this means, I say, you can sometimes feel the lower surface of the liver, which is roughened in cases of cirrhosis. I have not succeeded in doing so in this case.

Now the prognosis in a case of this kind, is not favorable. In all cases of kidney trouble, the tendency is for more and more of the kidney to become involved. Again in a great many cases, the outward evidences of renal disease do not bear an exact relation to the extent of the lesion. Sometimes a man will die of some intercurrent disease, and the kidneys will be found to be the seat of chronic nephritis. The wonder is, how such an one can go on so long without manifesting any evidence of kidney trouble. Of course, any intercurrent disease, in such cases, is very apt to prove fatal. So we will look upon the prognosis in this case as grave. As far as ultimate recovery is concerned, we cannot promise anything.

When you come to consider treatment, you want to bear certain facts in mind. First, that a great many of the symptoms and conditions that arise during the course of a chronic nephritis are not due to the kidney trouble at all. Of course, the majority of the graver symptoms are probably all ascribable to the kidney lesion. In the second place, what can we do for the kidney trouble itself? What can we do for the symptoms caused by the kidney trouble?

What can we do, in this case, for the actual lesion in the kidneys? Very little, I am sorry to say. We know that the albumen and casts are due to the kidney lesion, and we shall endeavor to diminish the amount of this substance in the urine, but I fear, only, if at all, temporarily. We will give tincture of the chloride of iron, and with a bichloride of mercury in small doses. This sometimes does diminish the amount of albumen and casts. The chloride of gold and sodium has in my hands sometimes proved quite useful, in these cases. It has perhaps a curative action on the lesion in the kidneys.

Then we must improve or remove those conditions due to the kidney trouble directly. Now of course most of the dropsy is due to the condition of the kidneys, but not all. Why? Because in a great many cases of nephritis, there are circulatory disturbances, or there are other troubles. Heart disease and kidney disease are frequently associated in the same person. We may have diseases leading to dropsy, independently of any renal trouble. We must then get rid of the dropsical effusion, which in the majority of cases, is due to the kidney lesion. Now with the kidneys in bad condition, we cannot as a rule, remove the fluid through that channel, so, besides using diuretics (I gave him ext. digitalis gr. $\frac{1}{8}$, arsenious acid gr. $\frac{1}{50}$ powdered squill gr. $\frac{1}{2}$, in pill, 3 times daily to improve the blood and as a gentle diuretic) you will remember I told you one of the leading objects is to produce free purgation, with a view of carrying off the liquid. You can do more good by means of purgatives than you can by means of diuretics in these cases, and, so far from increasing the patient's discomfort, you will greatly relieve him in this manner. You would not, of course, give large doses of the drastic purgatives when the patient is feeble.

I have prescribed for this patient, calomel, gr. v, jalap, gr. x, at bed time, and, by the way, that combination, though old as the hills, is one of the very best to remove effusions of this kind. As a result of the pill containing digitalis, arsenic and squill, and the powder given one week ago, the œdema is already somewhat less, especially in the region of the stomach. I want to throw out the thought here, that where the

heart's action is good and regular, as in this case, you are perfectly at liberty to prescribe hydragogue purgatives, and can do so much more safely than when the heart is not in good condition.

We will continue this treatment and endeavor additionally to limit the amount of casts and albumen by the iron and mercury mixture which I gave you.

I have another case of chronic nephritis, to show you; one that presents quite as many points of interest as the case you have just seen.

We meet with cases of organic heart trouble, frequently associated with chronic nephritis, and this may occur in three ways: 1, organic heart disease may lead to chronic nephritis; 2, we have a class of cases in which the heart disease follows the kidney lesion. Many cases that begin as acute diffuse nephritis and acute parenchymatous nephritis lead to a chronic form of nephritis, and you have coming on hypertrophy of the left ventricle, sometimes to a very marked degree; 3, we have a class of cases in which chronic nephritis and chronic valvular disease of the heart exist in the same person, but the one condition not necessarily dependent on the other.

In the case which has just gone out, you have chronic nephritis with a heart which is apparently normal; the left ventricle however, will certainly enlarge in a short time, as a result of the nephritis. In the present case we have lesions of the heart and kidney, one lesion, probably, independent of the other.

M. R; age forty-three; married; housekeeper all her life; gives a rather unsatisfactory family history. There is no distinct specific history obtainable; there is no alcoholic history in the family. We obtain, however, a feebly marked history of rheumatism; one of her brothers, a year ago, had rheumatism in this city. Her parents never were troubled with this disease, so that we get a comparatively negative family history. Her own previous history is not without interest. She had always been well until about nine years ago, when she had influenza. This was followed by a falling out of some of her hair; at the same time she had eye trouble, due probably to iritis. She was subsequently well until five or six years ago, when she was suddenly seized with œdema of the limbs, which soon included the entire body. When the œdema began she did not have rigors, followed by high fever, bloody and smoky urine and well marked nervous symptoms, but the œdema came on simply with some nervousness, some little nausea, and some headache. Headache she has been troubled with for some years past. Let us bear in mind a few facts pertaining to her primary attack to her bed; the attack lasted about three months, and under treatment the œdema all disappeared, not, however, permanently forever. Subsequently, during the last five or six years, she has had from time to time a little œdema of the feet; she also had well marked attacks of headache, always attended with a great deal of nausea and sometimes even vomiting. Now that is the history of a great many cases of chronic nephritis, the history of a great many cases of chronic diffuse nephritis, beginning with more or less marked subacute attack, without febrile symptoms, the evidences of the attack disappearing, followed by comparatively good health for a certain number of weeks, or even months. Even during that time, however, you would frequently find albumen and casts on examining the urine. During all these five years she went on in that way. In the fall of 1890 she contracted a heavy cold, which was followed by rapid swelling of the limbs. Suddenly, on the cold getting better, the œdema in great part disappeared. These attacks recurred many times during the following winter, and were attended with considerable cough and muco-purulent expectoration, dyspepsia, nausea and frequent severe headache. This is the history she gave a week ago. She also says that within the last month or two, the swelling has been permanent and has risen to the abdomen. Now, with this long history, remembering her condition when she presented herself, we can make a correct diagnosis, which is chronic diffuse nephritis. She has a mitral regurgitant murmur and a mitral stenotic murmur as well. She, in all probability, has some dilatation of the right side, a murmur with the first sound, over the ensiform cartilage, indicating tricuspid regurgitation. Remember that where you have organic disease of the heart, soon after compensation fails we have chronic congestion of the kidneys, which frequently leads to chronic diffuse nephritis, sometimes simply to chronic parenchymatous nephritis. The question, however, arises in this case, whether nephritis or valvular lesion from which she is also suffering, was the primary affection.

This woman's heart trouble may have been coming on for many years, without the knowledge of any one about her, until the compensation failed, and that may have been her trouble six years ago. On the other

hand, we do know too that there are cases of organic heart trouble such as we see here, associated with chronic nephritis such as we have here, the one not depending on the other, and that is one of the points I want to emphasize to-day. If we had had her under observation all these years, we could have determined which ailment came on first. Looking at the case from the present standpoint, we are probably only justified in saying that we have chronic valvular disease and chronic nephritis in the same individual, the one not necessarily causing the other. So these cases of chronic diffuse nephritis associated with chronic valvular trouble, are modified cases of nephritis and the treatment is different from that of the case which has just gone out. Here too, we must attack the lesion in the kidneys. We cannot do much for it directly; more can be done by improving the general health of the patient. Unfortunately, neither can we do very much for the organic heart lesions directly. We can, however, greatly modify the effect of the lesions in the heart by regulating its action, and by increasing the force of its contraction. That is what we have been trying to do in this case and we have in part succeeded. You remember I told you that when you have a good heart, free purgation is the best thing to push actively to reduce the dropsical swelling. In this case before you, however, instead of drastic purgatives, we have ordered small doses of elaterium gr. $\frac{1}{12}$ every two or three days, which will act on the bowels. I will give her Basham's mixture for its effect upon her kidneys. I have also given her something, not to modify the walls or valves of the heart directly, but simply to increase the force of its muscular contractions and to regulate its action. For that purpose I gave digitalis in combination with Basham's mixture. This meets several indications. Basham's mixture is more or less diuretic, as well as an astringent to the kidneys and is a good blood tonic, while the digitalis affects favorably the heart, and its diuretic action assists in getting rid of the effusion throughout the body.

Let us then continue this treatment which was begun four days ago, more especially since she comes back saying she is much relieved; indeed, her dyspnœa at the time of her first visit was frightful. To-day, she breathes very well, all because the heart's action has been regulated, diminished in frequency and the force of the contractions much increased. As in the case of this woman, there may be apparently imminent danger of death and yet within a week the patient may be perfectly comfortable, simply because circulation has been reestablished, the lungs have been relieved, and some effusion gotten rid of. In other words, what seemed a week ago to be a case of nephritis, far advanced, with danger of death, to-day is a patient comparatively comfortable, without any other symptoms than swelling, slight cough and dyspnœa on exertion.

NECROSIS OF TIBIA.—TREPHINING FOR EPILEPSY.

BY THOMAS H. MANLEY, M. D.

VISITING SURGEON TO HARLEM HOSPITAL, ETC.

Gentlemen: The first patient that I will show you to-day, is a female 34 years of age. Five years ago she knocked her left knee against a step and fell. Soon after this, she developed pain over theleft tibia, the parts becoming swollen, inflammed and markedly enlarged. At this time, she was operated upon for the relief of her trouble, but without any apparent success, and since that time, she has undergone four other operations at as many different hospitals in this city, but with the same result. She looks now, as you can see, pale, anæmic and exceedingly emaciated.

She has been suffering so much pain by reason of this trouble in her leg that she has been compelled to take large doses of morphine hypodermically for its relief. The patient has been sent to me, by her physician, for the purpose of having the leg amputated, close to the knee-joint, as she is suffering the most intense and constant pain and is every day becoming more and more emaciated.

Having secured the consent both of the patient and her physician to amputate, I shall be guided in that respect largely by the etiology of the trouble; whether it be due to sarcomatous, carcinomatous, tubercular or syphilitic causes. She gives us no history of any specific trouble whatever, and neither do the lymphatics or lungs show any evidences of tubercular infiltration, nor do I find any evidence of a sarcomatous or carcinomatious degeneration to account for this trouble in the tibia. So, having excluded all these etiological factors we are obliged to fall back on traumatism to come at the cause of this trouble. As a result of this traumatism, this woman first developed a periostitis, which was soon afterwards, followed by an osteomyelitis, with the destruc-

tion and subsequent removal of certain portions of dead bone. I have frequently seen an osteomyelitis develop from the use of strong antiseptic solutions on the denuded ends of living bone. A peculiar feature of this disease is that it will skip the articular structure of bones, without leaving any possible trace of its destructive action on the cartilaginous or other soft, overlying structures. I have frequently seen instances of this kind, so that when it cut down on the bone, have found it reduced to a pulp.

The question might be very naturally asked of me, Why not amputate in this case? With such a perfect knee and ankle action as we have here without the slightest impediment to muscular movement and complete integrity of the fibula, I do not deem it wise to sacrifice a limb without first making an effort to save it. What I propose to do here is to cut down on the diseased bone as far as the periosteum, and then carefully dissect the bone of this membrane and remove all the diseased osseous tissue that I shall find. There is one great precaution that I wish to emphasize in this connection and that is when I reach the bone, I shall avoid the use of any bichloride solution whatsoever, and guard carefully the overlying periosteum.

The patient was then placed under ether and the parts carefully washed and cleansed, first with soap and water, and afterwards with a bichloride solution of the strength of 1–5000. An Esmarchs bandage was then applied above the knee-joint and carried as far up as the great trochanter of the left femur. An incision was then made with a scalpel through the soft parts, commencing at the insertion of the ligamentum patellæ and carrying it downwards about six inches along the anterior aspect of the tibia, dividing the skin muscles and fascia until the periosteum was reached. These were carefully held apart by means of hooked retractors held in the hand of an assistant and the periosteum was then cut through, and very carefully elevated from the bone by means of a periosteal elevator. When the bone was brought into view, it was found to be a complete shell and quite hard. It resisted several attempts on the part of the operator to cut through it with a chisel. When finally broken off these sections of bone were found to be wholly devoid of nutrition. The entire diseased surface of the bone was then scraped away by means of a Volkmann's spoon, and the medullary cavity opened and washed out with warm sterilized water. The periosteum was then sutured separately throughout its entire extent by an independent set of sutures and the overlying tissues were brought together and closed with catgut sutures, an opening at the upper portion of the wound being left for the insertion of a drainage tube. The surface of the wound was then dusted with iodoform powder and the usual dressings applied over this.

The immediate results of the operation were of a most gratifying character. The patient had been obliged for over four years previously to resort to daily use of large hypodermic injections of morphine to secure relief from pain. Since the operation, however, this pain has disappeared altogether and for the first time in four years has she been able to enjoy her natural sleep at night without the use of narcotics of any description whatever. Her appetite has returned, her bodily strength has been improved, and the case promises to be entirely successful. The operator thinks that within two or three months at the furthest, sufficient bone regeneration will have taken place and consolidation along the line of the tibia have been secured to enable the patient sufficient support for the purpose of locomotion.

TREPHINING FOR EPILEPSY.

The second case I will show you is that of a young man, twenty-two years of age, with a family history as follows: He is the offspring of the marriage of an uncle and a niece, and enjoyed good health up to his fifteenth year when he developed an attack of typhoid fever of a rather mild character. Shortly after his recovery from this attack he was taken with epileptic seizures. At the beginning, these attacks came on at intervals of a month or two apart, but as he approached manhood, they became more frequent, so that lately be has been compelled to give up his work altogether and place himself under medical care. Various medicinal agents have been used towards overcoming this malady but without any meterial benefit whatever. Previous to his entrance to the Hospital he had on an average one convulsion a day, and, in connection with these seizures, he likewise suffered almost constantly from vertigo, headache, dimness of vision and melancholia. There was no history in his case of traumatism, except that at birth he was delivered by the forceps and at the temporo-parietal junction, immediately over the sagital suture on the left side, there was a well-marked depression of bone.

When the patient was referred to me by his physician, Dr. Randolph, of New Jersey,

he was anxious that I should promise an improvement in his condition, as a result of the operation, but this I declined to do. I, on the contrary, told him that an operation for trephining the skull was always a serious surgical undertaking, and one not devoid of danger to life, so that he must be prepared for any possible accident that might happen. I further told him that the operation might not result in any improvement in his condition. In spite of this plain statement of facts, the patient expressed himself to be desirous of placing himself under my care and taking his chances as to the consequences, inasmuch as he was unable to follow his usual occupation or do work of any kind on account of these convulsions.

I will proceed to trephine in this man's case with the use of an instrument of a narrow diameter and procced by slow stages until the cranial cavity is reached, when I shall enlarge the opening in the scull by means of a large Rougeur forceps and remove as much of the cranial plate as may be deemed advisable. With regard to the re-implantation of a disc of the fragments of the bone removed, that I shall not undertake to do this, for the simple reason that the operation is undertaken for the relief of pressure, not temporarily but permanently, and the replacement of bones in their former position would only leave things in very much the same condition as before the operation was performed. Furthermore, even though this course might be deemed advisable, it is almost invariably impracticable, for the simple reason that an osteoplastic operation of the scull in which bone is implanted, after being wholly detached, almost inevitably results in failure, the returned fragments exciting, either a local inflammation and ulceration, or if they take on adhesions, in the course of time undergo complete resorption and disappear.

If I shall find the bones of the skull in this instance diseased or extremely vascular, no matter how important the restoration of these fragments may be considered, yet the free oozing of blood through the divided surfaces of bone would interfere with the reunion of the fragments.

After the skull has been divided with the trephine, I shall take particular care after I reach the dura mater, and before the arachnoid and pia-mater are exposed, to employ no antiseptic on those delicate serous membranes, but to depend solely and exclusively on sterilized water at blood heat; because I have found out, that when antiseptics are applied on the denuded serous membranes of the brain, there is great danger of meningitis resulting, which in my observation, particularly in children, almost certainly results in a fatal issue, despite whatever precaution you may take to prevent its spread. Accordingly, I shall employ antiseptics only on the surface of the external wound.

The patient was then placed under ether and the scalp having been completely shaved, a large oval incision was made through the scalp, connective tissues, Galea-capitis, and the pericranium; the scalp, the muscle and the pericranium, being each, detached and reflected back from each other. On applying the trephine immediately over the seat of the depression, it was found that the bone had a hardness as great as that of ivory. After the bone was exposed, the diploe was reached, and the inner plate of the skull touched by the teeth of the trephine, the instrument was withdrawn, so that the disc of the outer plate of the skull might be removed before the trephine was carried nearer in the direction of the brain. When this disc of bone was raised, it was discovered that the trephine was on the bare dura mater; in other words, that there was no diploe: it had become completely absorbed and the bone thin and eburnated. The Rougeur was then taken in hand and the opening enlarged until it had a diameter of about two inches. The dura mater was next incised when the convolutions of the brain crowded up through the opening made in the osseous vault. The parts having been freely sterilized, the finger was introduced through the incision made in the dura mater between this membrane and the arachnoid, the brain substance gradually pressed back in different directions. No further depression was discovered, but there was considerable spouting of blood from one of the vessels between the convolution of the cerebrum which occasioned considerable trouble before it was finally controlled.

The parts having been freely irrigated with warm sterilized water, the dura mater was sutured with fine catgut, the pericranium replaced and sutured in the same material. The muscles and scalp were sewn consecutively with catgut sutures; and no drainage was employed, except a strand of catgut at either terminus of the incision. The surface of the incision was now freely irrigated with a bichloride solution of the strength of 1–5000 and the ordinary antiseptic dressings applied.

The patient recovered well from the ether but the following day he had a temperature of $100\frac{5}{10}°$ F., and a sensation of great heat and irritation in the scalp. He slept well,

however, and on the third day the dressings were changed, when it was found, as a result of the free use of the corrosive sublimate solution, his entire scalp was one mass of vesicles. It was clearly evident then, that if the bichloride solution would give rise to such an extensive dermatitis as this, on the hard and resisting scalp, that its action on the sensitive and delicate structure of the meninges might result disastrously to the patient. Vaseline was freely applied to the blistered scalp and soft, fluffy dressings as a covering over this.

The patient developed no seizure since the operation, save on the fifth day he had a slight twitching of the muscles of the face, but accompanied by no loss of consciousness, no vomiting, or no turgescence of the vessels of the face. His general condition has been very greatly improved, his sense of vertigo, headache and oppression in the employment of vision having wholly disappeared. The incision healed by primary union.

The remarks above given have been written three weeks after the operation was performed, and it is safe to infer that this case presented one of that favorable class wherein trephining may be considered as an operation that will lead to a permanent cure for epilepsy.

COMMUNICATIONS.

AN ESSAY ON THE HISTORY OF MEDICAL SCIENCE. [1]

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For the purpose of briefly reviewing the history of medical science, the residence of men upon the earth may be conveniently divided in four epochs. The first extending from an indefinite past to a time probably 3,000 years before our era, when medicine was practiced by Egyptian priests; the second from this time, say 3,000 B. C., to the appearance of the Greek physician, Hippocrates, born 460 B. C., the third from Hippocrates to Albrecht von Haller (1708–1777;) the fourth from Haller to the present time.

First.—During that long and remote period of time in which man, clothed in the raiment with which nature provided him, wandered alone on the face of the earth, not yet having acquired the faculty of articulate speech, he had no more knowledge of remedial agents or resources than is possessed by the grizzly bear.

Second.—But in obedience to the law of evolution, language developed; society became organized; the forces of nature were to a certain extent subdued to the uses of man, and wealth began to accumulate, so that all his time was not occupied in securing the absolute necessities of life; then there was leisure for meditation, speculation and investigation.

Civilization having first appeared in tropical or semi-tropical latitudes where the aspects of nature are comparatively speaking, terrible, the imaginative faculties of the mind were early brought into exercise. Events occurring suddenly without warning and without apparent cause, such as earthquakes, volcanic eruptions, inundations, epidemics of fatal disease, were attributed to the wrath of an outraged deity (and what a *horrible* insult to the intelligence of the 19th century, that it should be proclaimed from the pulpit of a Christian Church that the recent floods on the Atlantic coast were an expression of the wrath of God.) Disease thus being thought to be of supernatural origin, it followed naturally that the first remedy that suggested itself to the human mind was some sacrifice to appease the offended God; and if a sacrifice were to be offered, the individuals who would be expected to officiate with the greatest prospect of success would be the magi or priests, devoted to the service of the gods. It thus happened that the sacerdotal class very generally and over a wide extent of the earth's surface in both hemispheres, were the first to practice the healing art. Magic and incantation were the earliest means resorted to to effect a cure. When, however, in the course of time it was found by accident or experience that certain roots and herbs possessed remedial virtue, these were added to the armamentarium of the magician. Owing to the implicit confidence of the people in the efficacy of magic, these developed a very interesting combination of the practical and the magical in their methods. The *practical* recipe might contain any variety of roots and herbs applied in ointment or drunk in decoction, but *with* this the magical formula was also roquired to deal with the demon cause of the disease. The analogue of this practice can still be witnessed every day in the practical directions of the physician as to diet and regimen, while he gives a prescription to please the fancy of the patient, or in

[1] Read before the "Fortnightly Historical Club," Milwaukee.

other words incant, that is, enchant the demon cause of the disease.

As man first became civilized on the banks of the Nile, we naturally look there for the first evidences of the existence of a knowledge of medicine. We accordingly find that the traditions of the ancient civilizations, outside of Egypt, refer the origin of their acquaintance with medicine to that country. It is, however, supposed by some that progress was made in this science at an equally early date by the Assyrians and even by the Phœnicians.

There is in Berlin a papyrus of the 14th century B. C., being an essay on inflammation written in the ancient writing of Egypt. In the 11th century, B. C., there was in Egypt a college of physicians, and monumental writings confirm the fact referred to in Exodus that women practiced in certain departments of medicine there. The Egyptian Orus and Thoxeth have been regarded as the prototypes of the Greek Apollo and Hermes.

During the Egyptian bondage the Israelites acquired some knowledge of medicine; an evidence of such knowledge being afforded in the article by Moses in the diagnosis and treatment of leprosy. (Leviticus xiii, xiv.)

The Greeks derived their first knowledge of medicine from Egypt, and at the time of Homer they they had made some progres in that science. Ancient traditions say that the Centaur Chiron was the first Greek physician. His pupil, Æsculapius, about whose history there is much of uncertainty and mystery, became to the Greeks the God of Medicine. The sons of Æsculapius became physicians, and two of them, Machaon and Podalirius, were surgeons in the Greek army during the Trojan war. In the first battle on the banks of the Scamande, Menelaus received a severe wound. Machaon removed the "shaft" and

"Straight the broad belt with gay embroidery graced
He loosed; the corslet from his breast unbraced;
Then sucked the blood, and sovereign balm infused,
Which Chiron gave, and Æsculapius used."

Iliad iv. Line 248 *et. seq.*

In the third battle Machaon himself was so severely wounded as to render it necessary for him to be taken to the rear. Idomenens, in urging Nestor to convey "Great Machaon" with all speed to the ships is made to say:

"A wise physician, skilled our wounds to heal,
Is more than armies in the public weal."

Iliad xl. Lines 836 and 637.

It would, however, appear from the references to medicine scattered through the works of Homer that external medicine (surgery) was practiced almost to the exclusion of internal. Internal diseases were treated as in Egypt and Persia by incantation and magic. Among the Greek warriors in general, at the time of the siege of Troy, a knowledge of the treatment of wounds was widely diffused. An indication of this is furnished by an accident by Ulysses. While boar hunting the wild beast gored him in the knee, laying bare the bone. The wound was closed and successfully treated by his companions. Odyssey xlx. Line 500 *et. seq.*

The descendants of Æsculapius continuing the practice of medicine, gave rise to an order of priests devoted to the service of the god of medicine. They were called Æsclepialæ, Aristotle was of this order. Eighteenth in the line of descent from Æsculapius is Hippocrates.

Third epoch, Hippocrates to Haller.

The Greek mind was advancing and emancipating itself from a belief in sorcery and magic. Travelers were returning from journeys into Asia and Africa bringing with them foreign ideas.

Thales, the father of Greek philosophy, was of Phœnician descent, born in Miletus, Asia Minor, about 640 B. C. He resided for twenty-two years in Egypt, and while there imbibed philosophical ideas from the lower classes, which upon his return, he made the basis of Ionian philosophy. Following him came a great host of philosophers, and almost as numerous schools of philosophy. These philosophers were deductive reasoners, and their systems were based on that method. We understand by deduction reasoning from general truths to particular truths; from principles to facts; from the greater to the lesser; from the abstract to the concrete; the assumption of a general truth of principle and from that reasoning downward to particular facts or truths.

Hippocrates (460–350 B. C.) became a philosopher, turning his attention to medical science. It was inevitable that he should be powerfully influenced by the great speculative philosophers with whom he was contemporary. Antisthenes, Aristophanes, Democritus, Diogenes, Icocrates, Plato, Protagoras, Socrates, all of whom were deductive reasoners, and he hence proceeded in the same manner. By this method he sought to evolve from his own inner consciousness a knowledge of the nature of disease. It is unnecessary to enter at all fully into the speculations of Hippocrates, suffice it to say that to him is attributed the so-called

"Humoral Pathology," that is, that the essential seat of disease is in the fluids of the body. Disease, therefore, being an entity and seated in the blood, the practice of blood letting naturally followed, in the hope of thereby removing from the body the entity disease. He was a good observer and left voluminous works, many of which have been preserved to the present time. He recognized "the restorative power of nature."

The Greeks having entered enthusiastically into speculative philosophy and proceeding by deductive methods, there soon arose innumerable *schools* of philosophy; the various sects of the Ionian, Eleatic and Italian; the Cynic, Pythagorean, Epicurean, Sophistic, and this was inevitable from their methods of reasoning. Medical science likewise, having been founded on the philosophical speculations of Hyppocrates a deductive reasoner, necessarily presents a similar history down to our own century.

There were the Empirics neglecting anatomy and physiology and following only experience, without inquiring the *how* or the *why;* the Dogmatics claiming all authority for doctrine on theory; the Methodists who believed it unimportant to know the cause or nature of diseases, but only their common qualities, these being relaxation, contraction of minute passages, and a mixed state; the Eclectics who had no theory of their own, but tried to extract grains of truth from others; the Sceptics who were satisfied with asserting "That nothing could be known, nothing demonstrated."

Galen in the middle of the second century A. D. pursued the study of medicine in Alexandria, where he was a witness of and active participant in the controversies going on between the different sects in medicine, which were no less acrimonious than the conflicts between religious sects. He became the founder of a new sect or school based on the nature of medicines. He adopted the Hyppocratic ideas of the four elements earth, air, fire, water; the four humors blood, phlegma, bile and black bile; the four qualities dry, moist, hot, cold; applying the same qualities to drugs. He also endorsed the "Humoral Pathology." He exhibited wonderful ingenuity in explaining the numerous visible phenomena of disease, according to these principles. He was an industrious writer and an accurate observer of the symptoms of disease.

Celsus, although not the founder of any medical sect was the first Roman to make his influence felt in European medicine.

Until the fall of the Western Empire and the beginning of the Dark Ages, the Galenic school was dominant in Europe. During the Dark Ages what knowledge there was of medical science, together with nearly all scientific knowledge disappeared from Christendom; and was only saved from extinction by the Semitic Jews and Arabs.

While the Arabs occupied their own barren and dreary country they remained rude, barbarous, and ignorant, but Mahomet having arisen and established his religion among them, they embarked on a wonderful career of proselyting and conquest. They no sooner abandon the old scenes and subjected themselves to new environment, both as to scenery, people, soil and climate, whereby they were enabled to accumulate wealth, than they developed a capacity for civilization and intellectual advancement which will always excite wonder in the mind of the student of their history. Throughout the Moslem Empire great academies and universities sprung up.

At these institutions of learning medical science received its share of attention. The Arabs first raised pharmacy to the dignity of a science and produced the first pharmacopœia. They first applied chemistry to the practice of medicine. In surgery they made free and effective use of the knife and actual cautery. At this time, in Christian Europe, the sufferer from disease hastened to some Saint's shrine, expecting to be cured by miracle. Sancho, the Great, King of Castile, visited Cordova to receive treatment at the hands of Moorish physicians. Charlemagne employed for himself the services of the celebrated Jewish physician, Wintarius, and one at least of the Roman Popes employed a Jewish doctor. Ehazes, an Arab physician of Baghdad, 10th century, first described small pox and measles. Mesna, of Damascus, 11th century, produced the first work of any account on Materia Medica, a work which served in the time of James I, of England, as the basis of the first London Pharmacopœia, issued by the College of Physicians. The great names in Arabian medicine are Albucasis, Alkhendi, Axenzoar, Averrœs, Avicenna, Mesna, Ehazes, Serapin, besides a long list of lesser lights. For the amount of work done and the industry manifested by the Arabians, comparatively little actual advance was made in medical science, their chief merit being, that besides making important discoveries in pharmacy, Materia Medica, therapeutics and chemistry, they kept from oblivion what was already known.

In the 15th or 16th century, the chemical

school arose, of which Paracelsus was the most conspicuous representative. His name was Theophrast Bombast von Hohenheim, but regarding himself as a greater man than Celsus, he assumed the name Phillipus Aureolus Theophrastus Bombastus Paracelsus. The fundamental dogma of this school was that the human body contains within itself all the parts of visible nature "sun, moon, stars, and the poles of heaven" (whatever that may mean) and subject to the same chemical laws. Diseases were therefore to be treated by chemicals. Paracelsus believed that he could indefinitely prolong life by his mode of treatment, yet he himself died at the age of forty-eight years. He introduced into practice, antimony and calomel. His career produced but little effect upon medical science, and his followers degenerated into quacks and impositors.

Italy which was intellectually in advance of the rest of Europe early in the 16th century was no less so in medicine. Clinical lectures were first delivered in this century by DeMonte, at the Hospital of St. Francis, at Padua. Students of medicine from all parts of Europe flocked thither for instruction.

The 16th century having accomplished the reformation, probably the most momentous event in the history of mankind, and the human mind being in a measure released from the thralldom in which it had been held for a thousand years by religious intolerance and bigotry, rapid advances were made in all those things which go to make up civilization. Medical science participated in this movement.

The 17th century presents the names of Harvey, Bartholine, Hooke, Malpighi, Willis, all of whom made more or less important discoveries in anatomy and physiology. This was the century of Bacon and the Novum Organum, Des Cartes and the mechanical philosophy, von Helmont and his chemical explaination of morbid processess, Sylvius and Glisson, whose names have been given to certain anatomical structures.

Although Bacon in this century raised the inductive method to a working system, it did not produce any immediate result either upon philosophical speculation or medical science. The deductive methods of the preceding two thousand years had developed a corresponding characteristic in the mental processes of man, so that even men who appreciated the futility of the method, ably demonstrated it, nevertheless fell victims to hereditary tendencies, and the influences of environment. We see a notable instance of this in DeReed, one of the founders of the Scottish School of Philosophy. He ably demonstrated the weaknesses of the deductive method, announced his purpose to erect a system of philosophy by inductive methods, and then *deductively* laid the foundation of the "Common Sense School." The same thing is true of John Hunter, the great pathologist, who was never able wholly to emancipate himself from deductive methods.

The two principal schools of the 17th century were the Iatro-physical and the Iatro-chemical. Borelli, of Naples (1608-1679), who was the most celebrated exponent of the former, explained all the functions of the body on mechanical principles. The body was regarded as merely a system of tubes, and all the vital processes were explained by the principles of hydrostatics and hydraulics. This was a very popular and powerful school. Sylvius of Leyden (1614-1672), was the founder of the latter. The adherents of this school made extensive use of chemicals in the treatment of disease, and taught that every organ of the body had its own particular fermentation, and that abnormalities in the condition of these ferments is the cause of all disease. They denied the humoral pathology of Hippocrates.

The 18th century was one of great activity in medical science, as it was in every field of inquiry. But men not yet having abandoned the deductive methods of their predecessors, and laboring under the influence of that great obstacle to all advancement, exaggerated respect for the past and the great names of history, a great number of schools or systems had their origin in this century.

Bœrhaave (1668-1738), attempted to establish an electric school by selecting all things valuable from the writings of his predecessors.

Hoffman (1660-1742), attempted to reconcile the idealistic and materialistic schools of philosophy, and his medical theories from a part of his complete theory of the universe. According to him, health depends on a proper "tone," some diseases being produced by excess of tone or "spasm" and others by lack of tone or "atony."

Stahl (1660-1734) opposed the materialistic school of philosophy, carrying his views into medical speculation. The theory of Stahl "Animism" attributes to the soul the ordinary functions of animal life in man. The symptoms presented in sickness

were simply the efforts of the soul to rid itself of disease.

John Brown (1735-88), of Scotland, founded what was known as the Brunonian School, based on the principle "excitability." He taught that some external or internal excitant gives rise to all the vital phenomena, that diseases are all either sthenic, that is, dependent on too great excitability or asthenic, dependent on deficient excitability. This system did not exercise much influence outside of Scotland.

John Hunter (1728-93), the great Scotch patholigist promulgated the theory that diseases are seated in the solids of the body rather than in the fluids. This theory exerted a very salutary influence over the then prevalent practice of indiscriminate blood letting.

The last system builder whose name deserves mention is Hahneman, whose speculations have given rise to the Homeopathic School. This system requires a fuller notice than the others because it is the only *school* of medicine which even in name has survived the inductive methods of the 19th century.

Hahneman (1755-1843) in medicine, like Reed in philosophy, fully recognized the untrustworthiness of the prevalent deductive methods, and vigorously opposed them, but, like Reed, in attempting to improve upon medical science as it then existed, he built up another by the identical methods he had been engaged in opposing.

His system is based on the law of therapeutics known as "Similia similibus curantur," that is, in order to cure a disease a medicine must be administered which, if given to a person in health, would produce symptoms similar to those manifested by the disease. This theory was not, however, original with Hahneman, for Hippocrates speculated upon it, and still later, Paracelus entertained it, laying it down more specifically and almost in the very words afterwards used by him.

This was not, however, all of homœopathy. According to it the "vital process is neither mechanical, nor chemical, nor stoechiometric, nor electro-galvanic, but is a higher power which avails itself of these subordinate principles in the performance of its functions." And this being so it was theorized that drugs which act upon the vital processes do so by virtue of "some occult self-existing force"; the causes of disease were impalpable, immaterial and spiritual, and to be removed by drugs possessing "some occult *self*-existing force." Disease was in fact simply the "totality of the symptoms" and was a "spiritual dynamic derangement of our spiritual vital principle." From these speculations arose Hahnemann's doctrine of the dynamization or potentization of drugs by dilution. He carried this principle so far as to teach that when a drug was carried to a *high* dilution, olfaction was all that was necessary to produce its effect, and that if, in making the 30th attenuation of *drosera*, the mixture was shaken twenty times instead of ten, a dose of it might prove fatal to a child. He taught that seven-eighths of all chronic internal diseases were caused by *psora* or the itch driven in; that investigations in pathology were useless as "nothing can be known of disease with certainty except its perceptible phenomena," that is its symptoms; he denied the power of nature to heal, attributing to drugs alone the power to *cure* disease. "That state of the organism which we call disease cannot be converted into health but by the aid of another affection of the organism excited by means of medicines." It is almost needless to say that the disciples of Hahnemann have for a long time abandoned his theories with respect to the nature of disease, potentization of drugs by dilution, and psora or the itch. And moreover a very large proportion of them while they believe there is such *a* law as that of "similia" do not claim that it is *the* law. Homœopathy, therefore, being a deductive and theoretical *system* has never been able to produce one single great discovery in any branch of medical science, either preventative or curative, or in any of the collateral sciences, or one of sufficient importance to attract the attention of mankind, as to be recorded on the pages of medical history.

This brings us to the fourth epoch—Haller to the present time.

The dawn of a better day was about to break upon medical science. Inductive methods after a slow and painful struggle were forcing themselves more and more upon the attention of investigators in every department of science. The inductive method is the direct reverse of the deductive; it is reasoning from facts to principles; from the lesser to the greater; from particulars to generals; from the concrete to the abstract; the observation of a vast number of facts and the carrying on of multifarious experiments then, is the distinctive feature of the inductive method, and generalizations are only reached after the most exhaustive and elaborate experimentation and study. By this method nearly, if not quite, all the great discoveries in science have been made.

Albrecht von Haller (1708–1777) was born in the city of Bern, Switzerland, and became a professor in the medical department of the University of Göttingen. He saw the hopelessness of arriving at scientific truth by the current methods and casting theory entirely aside, expressed the opinion that the only way to develop *rational* medicine is by studying anatomy, physiology, pathology and the physiological effects of remedial agents; that for good diagnosis we need pathology, and for pathology, physiology is indispensable.

Rational medicine then began when Haller recognized the fact that "the laws of nature are not things which we can evolve by any speculative method. On the contrary we have to discover them in the facts; we have to test them by repeated observation and experiment. In proportion only as they hold good under constantly increasing change of conditions, in a constantly increasing nnmber of cases, and in the greater delicacy in the means of observation does our confidence in their trustworthiness rise."

Since the time of Haller the advancement of medical science has gone on with ever accelerating speed, so that the medicine of yesterday is not the medicine of to-day, and to-morrow that of to-day will represent the historic and dead past. Haller was professor of anatomy, botany, and the practice of medicine and surgery in the University of Göttingen. To-day a first-rate medical school requires from eight to fifteen professors to teach the same subjects. This is simply given as an illustration of the growth of these sciences during the past hundred years.

To merely mention the positive advances made by medical science in this fourth period would be a weary task, and would be tedious and uninteresting to the general reader, but I cannot close without adverting to certain men and certain discoveries which may almost be said to mark epochs in medical practice and thought.

Marie Francois Xavier Bichat (1771–1802) opened a new era in medicine by directing the attention of investigators to the study of *tissues* of the body. He only lived thirty-one years, but his indefatigable energy, profundity of knowledge and reach of thought, justly entitled him to the epithet of "father of general anatomy," His great work on "General Anatomy" appeared in 1801, one year before his death, and is now, of course, ancient literature, but the impulse it gave to the study of elementary *tissues* of the body has given rise to the present science of histology, that is, the minute anatomy of tissues. From this has been developed the science of pathological or morbid anatomy. Bichat by his plan of studying the tissues hoped to arrive at some knowledge of the causes and nature of life itself. In this grand object he of course failed, but his name will be handed down to posterity not only as one who made important additions to an old science but laid the foundation of a new one.

The discovery by Jenner of vaccination need only be mentioned,

Marshall Hall (1790–1857) discovered the reflex function of the spinal cord and the excito-motor system of nerves, made public in 1832 and 1837. Magendie and Bell about 1825 discovered the existence in nerve trunks of separate fibers for motion and sensation, thus rendering it possible to diagnosticate diseases of the spinal cord, and laying the foundation for the present science of neurology. These discoveries deserve to rank with that of the circulation.

Lænnec (1782--1826) studied the sounds produced in the chest in the act of breathing, both in health and disease, also the sounds produced by the heart's action. He made minute and voluminous notes of what he heard, supplementing these observations by a very large number of post-mortem examinations. By these studies he was able to identify the sounds heard over the thoracic walls with the pathological condition found after death.

These studies, with that of those who have been his followers in this field of investigation, have raised physical diagnosis by means of percussion and auscullation to a science. Prior to this time endocarditis had no place in the classification of diseases and pericarditis was only guessed at, while valvular diseases of the heart were only located after death, on the autopsy table.

The labors of Richard Bright culminated when in 1827 he published a rather modest essay entitled "A Report of Medical Cases." This essay elucidated the pathology of those affections of the kidneys now known as Bright's Disease.

The publication by Beaumont in 1833 of his studies on digestion by means of experiments and observations on the historical Alexis St. Martin threw a flood of light on the physiology of this procees. It was thus learned that digestion is not completed in the stomach; that the active agent in stomach digestion is an acid liquid secreted by the walls of the stomach, and that this secretion is not a constant one, but is only poured out under the stimulus of food.

Schönlein, in 1839, discovered that the contagious disease of the scalp known as "favus" is caused by a microscopic parasite, to which the name of "Achorion Schönleinii" has been given. This discovery proved to be the starting-point in wonderful developments in our knowledge of parasitic diseases.

The discovery of Anæsthesia need only be mentioned; also the recent discovery of the local anæsthetic properties of cocaine which are of great service in minor surgical operations.

In Materia Medica and Therapeutics the work of discovery has gone on so rapidly that we now have a long line of valuable remedies which were entirely unknown a few years ago.

The discovery by Koch within the past twenty years that the essential cause of tuberculosis is a bacillus, has led to a great activity in microscopic studies of contagious diseases, and there are now strong indications that many of them will be proven to be due to the presence of microscopic germs. This discovery may be said to be the starting point of Medical Bacteriology.

The discovery that a microbe, the "Streptococcus Pyogenes Albus" is the essential factor in pus formation and that certain substances in solution destroy them, led in the hands of Sir Joseph Lister to "Antiseptic Surgery" which has prolonged thousands of lives during the few years it has been practiced. It has rendered otherwise grave operations comparatively safe, and has opened the wide field of abdominal surgery.

Lastly, I will speak of Louis (1787-1872), not last however, because least. On the contrary, I believe his labors and that of his co-laborers have done more to advance the efficiency of medical practice than labor in any other one direction in medical science. His opportunities for studying disease in the hospitals of Paris were immense, and he made the best possible use of them. He here studied the natural history of disease entirely uninfluenced by medicines. He spent many years in this work, keeping the most minute notes of thousands of cases. The result of these observations, was the discovery that certain diseases are, to use a term first applied by Dr. Jacob Bigelow, of Boston, self-limited, notably typhoid fever and pneumonia; that many of them tend intrinsically to recovery; and moreover that certain events in the course of disease, for example, hemorrhage from the lungs in the early stages of tuberculosis, are conductive to recovery. These discoveries have had a wonderful influence over the practical part of medicine, rendering the physician less vigorous in "combating" the *disease*, and more solicitous to maintain the vital forces of the patient until the disease has had time to run its course.

But there are still 17th century ideas remaining in the world and they die a prolonged and hard death. Thus, so firmly fixed in the *popular* mind is the notion of the physician's *antagonism* to the supposed *entity disease*, that the term "Allopath" is not regarded as misapplied, inaccurate, and a libel on a great body of scientific workers, even by those who known full well the derivation and signification of the word.

The rational physician then of to-day denies that disease is an entity in the body to be driven out like a wolf from a sheep fold; denies that it is impalpable, immaterial and spiritual and only to be *cured* by medicine; but affirms that it is a "perversion of the material structure of the body or some of its parts." He believes in the "Vis Medicatrix Naturæ," the power of nature to heal; he in fact knows that it *alone* effects a *cure* and that he is simply the "gentlemanly hod-carrier" of nature, supplying it may be materials with which she can work on removing obstructions from her way.

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THE TREATMENT OF ACUTE DYSENTERY.

BY ROBERT C. KENNER, A. M., M. D.,
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There is possibly no disease which will more greatly tax our resources, and which will require more skill and patience in its management than acute dysentery.

[1]Read before the Kentucky State Medical Society, May 28th, 1891.

The room which the patient occupies should be light and comfortable. While it should be properly ventilated, care should be exerted to prevent our patient from becoming chilled at any time. The bed covering should be adequate to prevent any draught of air from producing this effect. The patient should be directed to keep his bed. Any movement on his part will tend to increase the number of actions from the bowels, and at the same time make demand on his strength, and, in cases where there is much debility, of course, make possible a failure of the heart. Let us divide the cases of acute dysentery into two classes:

First—The Ephemeral: This embraces a class of cases all practitioners meet; it is the mildest form of catarrhal dysentery, and commonly lasts no longer than twenty-four hours to four days, even when no treatment whatever is employed. These cases are attended with slight inflammation, and are, in every way, ephemeral. It the *second* class I shall include those cases which persist, after four days, with increasing severity, or those which, from the beginning, show themselves essentially severer than the first-named variety from their incipiency, and which are denominated catarrhal and diphtheritic generally by the anthorities. Between these types, however, there is only a difference of degree of intensity of the disease, and this division of the subject into two categories has only for its object the convenience it affords in the discussion of the treatment. In the treatment of the first-named variety, rest is the essential curative factor. But this may be increased by producing its conditions. To insure perfect rest it is best to administer sulphate-magnesia and sulphate of morphine. We in this way remove all irritating matter from the bowel, and the opium brings about the desire to sleep. These supply the demands in those cases perfectly, and it is rare for another dysentric action to appear after the sulphate magnesia has acted. The *second* class of cases, however, yield not so kindly, and for its relief, the methods of treatment and various drugs used are very numerous. It shall be my aim in this paper to give consideration of only those which have been attended by results that would command respect or which have been advocated by gentlemen whose prominence and reputation as investigators in medicine inspire our confidence. A treatment which numbers among its advocates Bartholow and several good observers is one which advocates the administration, as a leading remedy, of the sulphite of magnesia. This remedy alone is one which, in my hands, has not proven satisfactory, but I depend on it rendering me assistance in connection with other remedies. A careful trial of the drng will not, I think, demonstrate its value at all as a curative remedy. It has failed to lessen the duration, in my cases, to the extent which I accomplished with other remedies. I am inclined to believe that the treatment by saline cathartics alone owe their place in medical literature to an illogical understanding of cures that appear to be accomplished by them.

First, there will be, in all epidemics of dysentery, cases belonging to the first-named class, and others not quite so mild which recover in a few days. These are, illogically, put down as cures brought about by sulphate magnesia, while all experienced physicians know that many cases would have recovered without any treatment. Again, the treatment by salines has gained strength by a comparison of statistics of cases treated by it with those treated by methods formerly in vogue. These statistics embrace those treated by mercury, blood-letting, etc., and are not of a character with which to compare any modern treatment. My own experience has been against the treatment, yet I find the sulphate magnesia a valuable adjuvant in the treatment of this affection. It evacuates the bowels well, and exerts a mild refrigerant influence. In the year 1859, Mr. E. Scott Docker, an English army surgeon stationed on the island of Mauritius, used ipecac in fifty cases, losing but one patient out of that number. To him belongs the credit of again bringing to the consideration of the medical profession a drug which for a long time had been buried in oblivion. This remedy had been introduced by Piso, who had seen the brilliant results which had been attained in the treatment of this disease by the natives of Brazil. It was used as a secret remedy for a long time, with much success, in France. Owing to a quarrel over the profits from its sale, the secret was made public. For a time the demand was very great. But it came, after a time, to be regarded as less valuable than was at first thought, and it soon fell into disuse. I have always thought the abandonment of this agent was due to its indiscriminate use, and to its application in cases of diarrhœa due to many causes. I believe it is not exaggeration to say that since the introduction of ipecac by Docker, thirty years ago, it has been the treatment most relied on by the greatest number of practitioners, and has obtained the greatest meed of praise at their

hands. In regard to its action, allow me to quote from Begbie: "The therapeutic action of the remedy has been variously ascribed to its nauseant, its diaphoretic, and its laxative or purgative effects." The latter was the view entertained by that distinguished writer, Sir John Pringle. Dr. Maclean thus expresses himself in regard to it: "It is probable ipecacuanha owes much of its usefulness in this disease to its action as an evacuant. It is also a blood depurant of an effective kind. It appears to increase the secretion of the whole alimentary canal, as well as the liver and pancreas; under its use tormina and tenesmus disappear, and feculent evacuations are more quickly restored than by any known remedy." Ewart and other great observers regard it as without a doubt, the most valuable remedy at our disposal. Shoemaker mentions that this drug has been used with the most striking results in the treatment of dysentery.

I have found, from my conversations with medical men, that they, to a large extent, fear the emetic qualities of this drug to such a degree that they hesitate to use it. This fear is ungrounded. It does not produce emesis at all in a large percentage of cases if the proper precautions are observed. But if it should produce emesis, this should not deter us from the use of so great a remedy. Emesis does not continue long, even when it occurs. It does not, except when there is great exhaustion, carry with it the slightest danger to life. But on the other hand, the production of emesis has been recommended as a curative agent by able observers like Pringle, before the ipecac treatment had any following in this country or England. Relative to its mode of administration, allow me to quote somewhat at length from Maclean. He says: "The patient should be at once ordered to bed, and as quickly as possible brought under the influence of ipecacuanha in large doses. Some insist on the propriety of first giving a full dose of Battley's sedative, tinct. opii, or a few drops of chloroform, with the intention of making the stomach tolerant of the remedy, and restraining nausea and vomiting. I believe that the sedative in some cases is useful, and acts in the manner just described. On the other hand, I have often seen ipecacuanha do its work well, and with little disturbance of the stomach, without opium. Should it be determined to premise opium, thirty drops of the tincture, and a half hour after followed by from twenty-five to thirty grains of ipecacuanha, which should be given in as small a quantity of fluid as possible; a little syrup of orange-peel covers the taste as well as anything else. As already advised, the patient should be kept perfectly still, and abstain from fluid for at least three hours. If thirsty, he may suck a little ice, or a teaspoonful of cold water at a time may be allowed. It is seldom that, under this management, nausea is excessive, and vomiting is rarely troublesome, seldom setting in for at least two hours after the medicine has been taken. The abdomen should be covered with a large sinapism, or a sheet of spongio-piline sprinkled with a little turpentine, after being wrung out of hot water. In from eight to ten hours, according to the urgency of the symptoms and the effect produced by the first dose, *ipecacuanha*, in a reduced dose, should be repeated, with the same precaution as before."

In my own practice the use of ipecac is, however, somewhat differently combined, though in the main I have followed the method just quoted from Maclean. It is my custom to give an hypodermic injection of from one-fourth to one-half grain of sulphate of morphine. I have also a piece of thapsia plaster applied over the epigastrium. My results with the ipecac treatment have been all that could be desired, and I have found that in ninety per cent of the cases treated with it as the principal agent, it brought about a cessation of the disease quicker, by from five to fifteen days, than other methods. The length of time which was consumed in bringing about the results will be considered later on.

It is my practice to give salol, in doses of five grains, every three hours, after six hours from the initial dose of ipecac. This has, I feel assured, rendered me substantial assistance in that it exerted an antiseptic action on the alimentary canal, relieved the gaseous distension and colic, which are often so annoying as to cause the patient the greatest discomfort and pain. Salol has, itself, some reputation as a remedy in dysentery. I am not prepared to speak of its powers when used alone, but I am sure when given along with ipecac its virtues will display themselves to the satisfaction of any candid observer.

It is important to say that I premise the treatment of all cases of acute dysentery to which I am called by a dose of sulphmag, and six hours thereafter, when there has been a thorough feculent evacuation, I administer the ipecac in the manner already outlined. Throughout these cases it

was necessary in many instances to employ as adjuvants many other agents, which will be considered under seperate heads.

The treatment by opium has the endorsement of Sydenham and others down to Prof. Flint, and several other able physicians have given it the most sweeping praise. It is usual for those who use it as the leading remedy to first clean out the bowels with castor-oil, or another laxative, and then give opium at such intervals as will secure quiet.

In regard to the use of opium in dysentery, Heubner says: "Especially is it impossible with opium or morphine to keep the bowels at rest all the time. The colic and tenesmus are, indeed, moderated for awhile, but they return after a time, even in spite of larger doses, and are then more violent than before. Besides this the state of stupefaction and heat into which the patient is brought by the use of opium is decidedly unfavorable in dysentery. I would, therefore, in common with the majority of writers of this century and the preceding one, not give my approval of the methodical use of opium in dysentery, and would only use this drug temporarily, and as a palliative remedy.

My experience bears out the correctness of these words of Heubner, and it is only when their is great pain, or persistent nausea, or, as has before been stated, we desire to prevent nausea, or sleeplessness, which no other drug can supply, that I administer opium. The reasons given by Heubner must be regarded as a valid and unanswerable argument in favor of the surrender of opium as a curative remedy of dysentery. At the same time its place could not be supplied well, and it will afford us assistance which we will not find easily in other palliative agents. The treatment by rectal injections of a solution of nit. of silver, or alum, or other astringents, is a practice which has had a following from the time of O'Beirne, in 1834, down, who have claimed results which were the most brilliant imaginable. Recently Prof. Whittaker has advocated this treatment, many able observers have given testimony as to the benefit derived from the treatment of dysentery in this way. I have not found it a treatment upon which I could place reliance, and have several times regretted having resorted to it. Just now there is not any generally agreed method of using these enemas. In children they are difficult of application, and several times I have found them very painful. It is possible at some future day the limitations of this treatment of dysentery may be outlined, and then it may be found that a certain class of cases will yield to them which before were intractable. Heubner, on this point, very justly says: "We must not expect too much from astringent enemas, for in the majority of severe cases much too small a surface is reached. In the dysenteries of 1870 I used the much-renowned nitrate of silver enemas almost without any evident good results; on the contrary, the pain was increased."

The treatment of blood-letting, or mercurials, have not at this time sufficient following to warrant a consideration here. Their place is only an historical one. The use of tannic acid, sulph. of copper, nit. silver, catechu, sub. nit. of bismuth and a long list of astringent medicines have been lauded by different writers at different times, but no one of these can be said to possess the power of abridging the duration of the disease. Yet when the disease is subacute, or when there seems to be a want of tone of the alimentary canal, these agents occasionally do good. The nitrate of silver sometimes is excellent in this demand. So will arsenite of copper, under circumstances like the one spoken of, yield us the happiest results. Recently the arsenite of copper has been lauded as a remedy of surpassing value, but in a limited experience with it I have not found it all that could be desired.

The question of diet is one of the greatest importance. Nearly all practitioners have seen the balance of life tip to the wrong side from improper indulgence in food. The diet should be fluid as nutritious as possible. Milk, fresh, and when necessary peptonized, is an important article. This should be given at frequent intervals throughout the disease. I most generally give some eligible preparation of pepsin immediately after taking the milk. This assists the weakened digestive forces, and prevents in that way the formation of milk curds, which would be as injurious to the diseased surface of the gut as the passing of feces. I alternate the milk with liquid beef peptonoids, and find the result to be good. The diet must be watched with considerable care until the convalescence has progressed unto a very considerable extent. Some authorities recommend allowing patients to eat ripe fruits when convalescence has set in fairly. This I have tried in ten cases, with the result of relapses in all of them. I was unable to attribute it to any other cause, and must, therefore,

charge it to the fruit. Since this unpleasant experience I have not allowed my patients to eat fruits—at least early in the convalescence. In fact, I charge them to make this one of the last articles to return to.

The question of the use of stimulants is one of the greatest importance in its bearings on the treatment of this disease. When the nature of dysentery is borne in mind, that it is an exhausting disease—one which soon brings stout people to be lean and strong ones weak—and in those who are delicate there is constant over exertion put on the heart—I think it will not be questioned that the proper administration of stimulants is a most proper and necessary course of action. In those who are strong it will not be necessary to give stimulants so often—every two or three hours, or oftener, if the patient is required to get up often. In delicate persons, brandy or some other stimulant should be given every hour or oftener, and in such quantities as will keep the volume of the pulse good. This will require an amount which the study of the parsicular case only reveals. Brandy, or milk-punch, or egg-nog, will be about our best remedy.

Another important consideration is fever. When the temperature does not attain a higher range than 103° F., it may correctly be regarded as a conservative process, and does not call for special medication. When there is a fever which we think is due to malaria, then it is our duty to prescribe quinine, but not without there is evidence of this fact. There are cases in which the fever will mount to 105° or 106°, and in those cases it is to be determined what measures shall be directed to the fever. I believe that if the fever is malarial nothing but quinine should be given; and, due to other causes, our reliance in reducing it should be put upon sponging the body with tepid water; and we should not fly to antipyretics until the last resort. These agents depress the heart, and make no substantial change for the better in the weak; yet it is occasionally right to resort to them, but it should not be done unless the fever attains a dangerous height.

There is probably no more distressing feature in this disease than tenesmus. For its relief several remedies have been offered, but none are all that we could desire. The application of bladders of cold water to the anus has been, in my hands, one of the best remedies. I employ occasionally leeches to the margin of anus, but find them no more beneficial than the cold bladders, and their application is often disagreeable to the patient. Carbolized vaseline smeared in and around the anus will afford a measure of relief and is worthy of trial. Prof. Loomis and several authors like warm applications to the abdomen. I have found poultices and all manner of applications which are laid upon the abdomen useless and awkward. They have to be removed when the patient arises, and are constantly falling off. This leaves the abdomen more exposed than if nothing was applied. I use in many cases turpentine liniment applied over the abdominal surface. This is especially valuable in cases where there is much gaseous distension of the bowels.

In conclusion, allow me to return to the ipecac treatment and say that out of sixty cases treated by this method ninety per cent. recovered in an average of twelve days. The remaining ten per cent. continued and became chronic or went beyond this time considerably. The test of the value of a given treatment is its ability to lessen the duration of the disease. In Flint's cases under the opium treatment the duration was from four to twenty-one days. This, of course, comprised cases of the ephemeral type. Heubner's cases are put down as light cases, eight to thirteen days; diptheritic, three to four weeks. When these facts are brought to mind it would seem that ipecac treatment is above all other methods at our disposal.

TUBERCULOSIS.[1]

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Tuberculosis may be truly said to be the pest of humanity. Few diseases are so insidious in their onset, and none so disastrous in their results. One-seventh of the human race is destroyed by it.

What tuberculosis is, the lesions it produces and the best means with which to combat it, will be my object to describe in this brief paper. Nine years ago Robert Koch proclaimed to the scientific world and conclusively proved, that tuberculosis was the result of the growth in the tissues of a micro-organism called the bacillus of tubercle. So conclusive has become the proof of Koch's assertions, so thoroughly has all opposition been swept away, that it would be reprehensible on my part to needlessly occupy your time with a history of the discovery of the bacillus of tubercle, and the steady ad-

[1]Read before the Allegheny County Medical Society, May 19, 1891.

vancement of the views originally promulgated by Koch until all opposition was silenced and antagonism turned to enthusiastic support.

The manner in which the tubercle bacilli gain entrance to the system are various, the respiratory and alimentary tracts being the most common seats of entrance, but there is abundant testimony to prove that abrasions in the skin may afford a vulnerable point for the entrance of the bacilli as is demonstrated in the production of lupus.

The bacilli may remain localized at the seat of entrance, or circulating in the blood current may fail to find a suitable location for their growth, and be ultimately destroyed or removed with the excretions. A less favorable termination, however, frequently takes place. The bacilli may find a nidus where the conditions are favorable for their growth in almost any of the tissues, but most frequently in the lungs, where they produce the disease called consumption; in the lymphatic glands, where they produce the disease called scrofula, a term now rendered obsolete; in the skin, where it produces lupus; in the bones, where they are said to produce twenty-five per cent. of all chronic inflammatory diseases. The joint structures, the tendons and tendon sheaths, the peritoneum and the brain are frequently affected. In fact, but few of the tissues are exempt from their inroads.

In acute miliary tuberculosis almost all the organs of the body become simultaneously affected. This seldom or never occurs from a primary infection, but nearly always from the absorption of some caseous material from some pre-existing tubercular focus, by which a quantity of the bacilli or their spores are liberated in the blood and attack the tissues, whose vitality is already impaired, and hence rendered less resisting by the presence of a pre-existing disease. So varied are the manifestations and treatment of tuberculosis, according to the tissues affected, that it would be impossible in a paper of this character to do the subject justice. I have therefore chosen to confine my remarks as closely as possible to the condition known as pulmonary tuberculosis, because it is the one with which as a body, we are most familiar and will, I hope, elicit a very free discussion. I will take it for granted that you are familiar with the histology and pathology of tubercle, subjects too well known to permit of discussion, and will pass at once to the consideration of the predisposing causes, the symptoms and treatment of pulmonary tuberculosis.

Prominent among the predisposing causes must be placed the hereditary tendency to the disease. It is not to be understood that the disease itself is inherited, but that the patient inherits from the parent, pulmonary tissue which has insufficient resisting power to repel the invasion of the bacilli. It may be well to remember that in a disease so prevalent as the one under consideration that the atmosphere under favorable conditions, is frequently contaminated with the tubercle bacilli or their spores, chiefly as the result of the drying of tubercular sputa, and it must happen that every individual, or at least those living in communities where tuberculosis exists, is frequently exposed to the contagium of the disease. If we also bear in remembrance that there is a standing declaration of war to the death between the bacilli and the tissues, and that in the conflict the weakest must succumb, we will readily realize why a parent with diseased lungs may bequeath to his posterity a legacy of tuberculosis. Another potent cause of pulmonary tuberculosis is prolonged contact with the contagium of the disease, as may be witnessed where the husband whose wife is tubercular contracts the disease, or *vice versa;* or in the melancholy but numerous instances where a member of a family without a tubercular ancestry contracts the disease, and the remaining members who have been in intimate contact with the patient are subsequently attacked.

Any condition or disease which lowers a patient's vitality is a predisposing cause of pulmonary tuberculosis, and it is the more powerful if the condition directly affects the respiratory apparatus. Among such may be mentioned imperfect development if the chest, occupations which hinder free and full respiratory movements, bronchitis, pleuritis and pneumonitis, the latter especially if the inflammatory exudate is slow in undergoing resolution.

It is unnecessary to pursue this part of the subject further, and I will only emphasize what my remarks must have indicated, that tuberculosis is a contagious disease, but in order that the contagium may thrive there must be conditions in the soil on which it is planted that are favorable to its growth.

When pulmonary tuberculosis has reached an advanced stage its manifestations are so plain, that he who runs may read; there is something so characteristic in the combination of symptoms that go to form the make-up of such a case, that a diagnosis is already made before the patient has been examined. The emaciated figure, the stooped

shoulders, the sunken chest, the rapid breathing, the hacking cough and the clubbed fingers, are so unmistakable and so familiar that even the laity are seldom in error in their conclusions. But of such cases I have little to say; they have probably passed the point where we can aid them; their fate is already sealed, and the utmost we can do is to ward off a little longer the impending doom, and ease the rugged pathway along which the victims of this cruel and relentless disease must tread until death, less merciless, stills the hacking cough and in eternal sleep throws the mantle of oblivion over the scene.

Of much greater importance to us and to the patient is the diagnosis of the disease in the early stages, important because the earlier the disease is recognized the easier is it to be contended with, and the more beneficent are our therapeutics.

Of such importance do I consider the early diagnosis of phthisis that I feel constrained, in order to emphasize its importance, to digress from the subject, and speak a few words on the curability of phthisis. Consumption is usually regarded, by the laity, as invariably a fatal disease, and I fancy, also, by some of our professional brethren, especially that class not yet extinct, who have a contemptuous disregard for physical diagnosis and microscopical achievements. And they have good reasons for such judgments, since the disease is seldom recognized by them until it has reached a stage where its progress cannot be retarded, nor a fatal termination averted. That consumption is necessarily a fatal disease is a false and grievous conception, and the sooner it is totally eradicated the better will it be for the profession and humanity.

Consumption is often cured when in the incipient stage. This fact was early impressed on me by numerous illustrations which I witnessed a few years ago among the river men while under treatment in the marine wards of Mercy Hospital. These men are notoriously careless of their physical welfare, and their occupations are of such a nature that pulmonary complaints are rife among them. At the time I referred to I was anxious to familiarize myself with the early symptoms of phthisis, and made the routine habit of examining every marine's lungs, regardless of the disease for which he was admitted. I was astonished at the number of cases of incipient phthisis that were discovered, often among those who did not complain of any pulmonary trouble, or, at the most, of a slight cough. It was even more astonishing to witness the frequency with which the physical signs of incipient phthisis would disappear under improved hygienic conditions and appropriate treatment. It is only fair to add that in these cases the diagnosis was based on the physical signs, as a microscopical examination of the sputa was not made. Since that time I have witnessed a number of similar cases, although such a happy termination does not always take place.

I do not put before you my own limited experience as conclusive proof, but will bring forward the cold facts as gleaned from a source into which mistakes in diagnosis and results are not liable to creep, namely: *post-mortem* examinations. The following is quoted from John Hughes Bennett's article on phthisis, in Reynold's System of Medicine (Vol. II., page 130): "The careful *post-mortem* examinations now made with such regularity in our large hospitals have demonstrated the frequent occurrence of old condensations, cicatrices, and calcareous concretions at the apices of the lungs in persons of advanced aged who have died of other diseases. In 1845 I pointed out that in the Royal Infirmary of Edinburgh they occurred in the proportion of from one-fourth to one-third of all the individuals who died after the age of forty. Roger and Boudet had previously shown that at the Salpetriere and Bicetre Hospitals in Paris, among individuals above the age of seventy, they occurred in one-half and in four-fifths of the cases respectively. There can be no doubt that these cicatrices and concretions indicate the healing and drying up of cavities and softened tubercular matter at some previous period in the life of the individual, and the consequent spontaneous cure of the disease in a considerable number of persons."

I return to the diagnosis of phthisis in its incipient stage, the importance of which I endeavored to impress upon you by pointing out that in this stage the disease, under proper hygienic and therapeutic treatment, was frequently curable.

Phthisis, in its incipient stage, is usually a very insidious disease. There is no line of demarcation to distinguish when health ended and disease began. Perhaps the very first indication is a condition of malaise—an indefinable feeling of not being well, without any concomitant symptoms to indicate pulmonary mischief. Often there is tenderness over one or both the apices of the lungs, or fleeting pains may attract the patient's attention to this region. A slight cough, associated with but little expectoration, is a

usual concomitant, although the cough may be severe and the expectoration profuse where a bronchitis has been an accompaniment or predisposing factor in the causation of the tuberculosis.

Another symptom of considerable significance is a slight elevation of temperature, which may not be over half a degree. If the temperature should be elevated on several successive examinations, and if there is no obvious cause for it, the presence of tuberculosis should be strongly suspected, and a careful examination of the lungs should be made. As regards the method of examining the lungs a few words may be said. The patient should be stripped, only the slightest covering to the chest, such as light under-clothing, is admissable. This rule should be rigorously observed, regardless of whether the patient be male or female, child or adult. If the patient, through false ideas of modesty, should object, it is the physician's duty to refuse to stake his reputation on a hazardous guess as to the condition of a patient's lungs, whose sounds are muffled from his ear by the interposition of a pair of corsets, and the various other paraphernalia which deck the female form.

The physician, who, under such circumtances, ventures to give an opinion as to the presence or absence of incipient phthisis, must either be gifted with an abnormal acuteness in hearing and discrimination in eliminating the extraneous sounds produced by the respiratory movements on the wearing apparel, or, what is more likely, he has a firm conviction that if he did hear the pulmonary sounds he would be unable to tell what they meant, and very considerately draws the line on his imposition at the point which necessitates the removal of the patient's garments.

To my mind the most characteristic of the physical signs of incipient phthisis is the broncho-vesicular breathing heard usually at the apex of the lung, and often best heard at the supraspinous fossa. The prolonged expiration heard in this region is significant, but care must be exercised that the blowing sound of the large air tubes be eliminated. With the broncho-vesicular breathing there is often associated a few crackling rales and a jerking inspiration, although the latter may be present when disease is absent. Percussion dulness and increased vocal fremitus are of very great weight as corroborative evidence of tuberculosis ; but the inability to detect either is of very little negative value.

Another very important element in the diagnosis is the microscopical examination of the sputa ; and here we come to the only pathognomonic symptom of incipient phthisis and that is in the demonstration in the sputa of the tubercle bacilli. The negative value of the absence of the bacilli is of but little weight, except on repeated examination of the sputa.

I will pass over the methods of staining and examination for bacilli ; also the symptoms of advanced pulmonary consolidation, and the stage of destruction of lung tissue with formation of cavities, and hasten to the no less important subject of treatment.

Prominent among the remedial agencies must be placed improved hygienic surroundings, a generous diet, and suitable climatic changes. A climate which permits of outdoor exercise the greatest number of days in the year is the one to which, in a general way, preference should be given. Where there is a tendency to hæmorrhages an elevated climate should be avoided, but under other circumstances an elevated climate, such as Colorodo affords, is preferable, inasmuch as the rarefication of the atmosphere necessitates a fuller expansion of the lungs, which, probably, tends to the reopening of the closed air cells. It may be well to sound a note of warning at this point on the folly of sending patients to another climate for the winter, in the hope that a permanent benefit will ensue. It seems to be a settled fact that patients who have been benefitted by such a change are under the necessity of remaining in the advantageous climate, as their return, except for a limited period, is fraught with the danger of a renewed outbreak of the disease.

Among the therapeutic agents may be mentioned cod liver oil, which may be said to be of value only in those comparatively few cases where it does not nauseate. The hypophosphites are doubtless of value, as are a score of other remedies. A favorite treatment of mine, and one which was chiefly used in the cases of the marines already mentioned, is the long-continued use of the following prescription :

℞

Hyd. chl. corr.	gr. j.
Ammon. chlorid.	ʒ ji.
Potas. iodidi.	ʒ jss.
Syr. pruni Virg.	ʒ iv.

M. Sig. One teaspoonful after meals and at bedtime.

The most remarkable remedy yet brought to light, and one which has made its already famous discoverer a household name in every home in the land, is Koch's lymph, or as it is more properly called, "tuberculin."

This remedy is the product of the tubercle bacilli. It is brownish colored liquid, is

exceedingly powerful, and is only used in the dilute form by hypodermatic injection, being inert if taken by the stomach. Now that the excitement following the announcement of the discovery has subsided and a considerable time has elapsed in which to test the value of the remedy, we may venture to give an opinion as to its merits and mode of action.

In order to understand the explanation given by Koch regarding the latter, it is necessary to speak a few words on the phenomena of coagulation necrosis, which is a peculiar change resembling coagulation caused by the action on the cells of a chemical product, or ptomaine produced by bacterial agencies. It is supposed that the casecation of a tubercular nodule is a condition of coagulation necrosis produced by the action on the tubercle cells of a ptomaine, the result of the growth of the tubercle bacilli. Koch reasoned that if he could add to the already ptomaine poisoned tubercular tissue sufficient of the same poison he could produce at will a coagulation necrosis of the living tubercular tissue, and thus place it in a condition to be either thrown off from the surface or removed by absorption. That this is the correct theory of the action of tuberculin I do not venture to express an opinion, but it explains in a satisfactory manner some of the phenomena observed in its use, such as the curious fact that the tubercle bacilli are not killed by the use of tuberculin, and that only living tubercular tissue is effected.

It is exceedingly difficult to give a satisfactory opinion as to the value of a remedy like this which has so many biased opponents and blindly enthusiastic advocates. What I have to say is the result of considerable attention to the voluminous literature of the subject, as well as personal observation of a great many cases under treatment in the hospitals of Berlin, and also about three months experience with the use of the remedy in this city.

In order to be brief, my opinions must necessarily be dogmatical.

Tuberculin is of considerable value as a diagnostic agent but is not always reliable, the reaction being often wanting in the surgical forms of tuberculosis and also occasionally in the pulmonary form.

As a rule the most marked benefits are obtained where the necrotic tubercular tissue can be thrown off from the surface as in lupus, tubercular laryngitis and tubercular ulcers.

Most cases of pulmonary tuberculosis in the early stages will be benefitted by the remedy, some to a very marked degree, so that a cure may be fairly claimed. Advanced cases of pulmonary tuberculosis where cavities have formed, and especially if the disease is rapid in its progress, are not likely to be benefitted, and will probably be injured by the treatment.

In the surgical forms of tuberculosis, tuberculin will be an aid to the operative treatment by assisting in the complete eradication of the tubercular tissue.

The nature of this paper restricts it within narrow limits. Many points upon which I would like to touch must be passed unnoticed, but I hope that this fact may, of itself, stimulate among the members a friendly criticism of the paper and a free discussion of tuberculosis.

(See Society Reports for discussion.)

Society Reports.

ALLEGHENY COUNTY MEDICAL SOCIETY.

Scientific Meeting, May 19th, 1891.

C. S. Shaw, M. D., Vice President, in the Chair.

DISCUSSION ON TUBERCULOSIS.

THE TOPIC FOR DISCUSSION, "TUBERCULOSIS," WAS OPENED BY DR. R. W. STEWART. SEE PAGE 57.

Dr. T. C. Christy: I think the paper of Dr. Stewart concisely and accurately written. His experience is of value to all of us. I agree with him on his points on the physical diagnosis of tuberculosis. I believe that every physician is in duty bound to strip his patient and examine thoroughly; it is the only true way to examine a case. It seems to me that there is no better antibacillic material than pure blood; that is, there is nothing that will destroy bacilli so much as pure blood. Secondly, that the larger cells that we find in the blood vessels will destroy the germs, and keeping these two points in view, we have a basis of treatment which cannot be surpassed. We must follow the line of Dr. Stewart's plan of treatment, that it is pure air, hygienic surroundings and care that are most efficacious in treating this disease. Now going back to the idea that pure blood is the best germicide we have, anything that will induce the formation of pure blood will place these patients in their early years in a much safer condition than they would otherwise be; that is, in public school buildings and in

their daily exercise we can do much to prevent them from contracting disease. Another point which has lately been advanced by a French writer: He says that animals are more easily affected by bacillic injections where they have been deprived of food; or, in other words, that hunger will make persons more liable to contract this disease. Taking pigeons, which are not particularly susceptible to bacillic influence when deprived of food for several days, injections of the bacilli caused inoculation and death, whereas where they were well fed, they were free from the influence of the bacilli. I think if we are careful in the examination of patients, careful in the management of their case not to underfeed them and to look after their hygienic surroundings, we accomplish more than we can in any other direction.

Dr. Grube: One person in seven dies of tuberculosis, and I venture to say that one-half of the race have the germs of tuberculosis in their system. It is natural that a disease of such importance should command our careful attention. Our profession is exceedingly active in devising some means for the treatment of this disease. I think the greatest point, however, one which the speaker who has just preceded me brought up, is the early diagnosis and treatment of this disease. It is a disease of predisposition, and I believe that the ground work is laid in the embryo. I think here is the secret of the predisposition to tuberculosis. Dr. Trudeau, of New York, made some valuable experiments. He made an experiment with which doubtless many of you are familiar, and which will, I believe, become classic. He took fifteen rabbits and divided them into three lots. With the first five, he injected the pure solution of bacilli into their lungs, into the abdominal cavity, and under the skin of the neck. These five he placed in a dark cellar. The next five were inoculated in a like manner, and were turned loose on an island in the lake in the month of June, and they were fed with vegetables in addition to the vegetation upon the island which was accessible. The other five were not inoculated at all, but a hole was dug in the middle of a field; this hole was ten feet in depth and the remaining five rabbits, having been placed in a box, were lowered to the bottom of the pit. The box was covered with boards and dirt, a trap hole being left for the introduction of food. Of the first five rabbits, in the cellar, four died within a month, and all of general tubercular infection. This existed not only in the lungs but generally. The five in the pit were taken out perfectly well; they were emaciated, their coats were rough, but there were no signs of tuberculosis in any of them. Of the five which were liberated on the island, one died within a month; it had some tubercular affection of the lungs. The other four grew fat, and at the end of four months, were perfectly well and in fine condition; they were killed then, and not even the point of inoculation could be found; there was no sign of tuberculosis whatever. Now I think this is a lesson which can be made of practical use. Some one has said that the cause of consumption in London was that the poor were too poor to buy butter and fat, and the rich injured their digestion with too much pastry. What I want to bring out is the point that the rapid loss of weight in one who has this predisposition ought at once to call our attention to the fact that he is preparing the way for bacilli, and it is an open question whether in such cases the loss of weight is caused by bacilli or whether the ground is merely being prepared for them; I am inclined to believe that the latter is the case. Of course with a great many patients it is impossible to do very much. It is a matter of ability to bring the patient through the early stages of the disease safely. This means giving up a vocation which they cannot afford to give up. The question of occupation is one of the principal ones in this disease. Nearly one-half the printers die of consumption.

Dr. Buchanan: Dr. Grube's remarks call to my mind the theory proposed by that excellent pathologist, Dr. Formad, to the effect that tubercular individuals were such as had narrow lymph spaces, that it was the obstruction in the lymph spaces that caused tuberculosis, and he endeavored to prove this by microscopical measurements of the lymph spaces in different species of animals. I believe he made the same observations on human beings who were tuberculous, although I am not sure of that. I do not know whether Dr. Formad has endeavored to reconcile his theories with the modern views of tuberculosis as brought forward by Koch, but I believe that Dr. Formad's theory had its origin about the time that Prof. Koch discovered the bacilli of tuberculosis.

Dr. Bane: I have been in Colorado several weeks, and there met many people who had gone to that State on account of consumption, who went there expecting to die, but whose lives have been spared by reason of the climate, or you might say, by the air,

which is dry and light, especially when you go where it is so high as it is at Colorado Springs and Denver. As has been brought out by Dr. Stewart, in order to get sufficient oxygen more air is inhaled, the lungs are expanded and the cells which are not used in this district are employed there, and there is no doubt this is one of the reasons why those patients who have not a sufficient breathing space are so much better in that climate. It is a fact that many persons die in Colorado of consumption, but unfortunately they go there too late to be benefited; if they would go while in the incipient stages, certainly many of them would live to a good old age, but as a last resort many go there when they should stay at home, when they would live longer at home surrounded by home influences, than they do in the climate of Colorado, with all its advantages. There are many things to be said about sending a patient to Colorado. Persons suffering from heart disease fare badly in the climate on account of the rarity of the atmosphere; persons of a nervous temperament do not rest well there. I met there a friend, a neighbor of mine in the profession, who some six years ago went to Colorado Springs. He was told that it was not worth his while to go, that he would not live more than six months. However, he went, and began to improve from the time he reached Colorado. When he arrived there, his temperature dropped down to normal and there remained. He continued to cough for eighteen months. Then he thought he might come home to Philadelphia; he returned home, and after remaining some two weeks, his cough returned and he was obliged to once more go to Colorado, and on his reaching that place the second time it took him as long as before to become free from the cough and feel well again. He then learned he would have to remain in Colorado if he wished to live long. From Colorado Springs he went to Denver, where he has a good practice and good health. From his appearance I should think he weighs about 200 lbs. One physician who went there with consumption now weighs 300 lbs. Certainly we have patients here that we cannot expect to cure in this climate that we are not justified in keeping here if they have the means to take them to a climate such as exists in Colorado. This is the impression made upon me after visiting the State and meeting these people. True, they have to remain there, but it is no punishment to live in Colorado, where they have as fine a climate as I have ever seen, and where eastern people, with eastern business and social ideas, form the bulk of the population.

Dr. Rigg: I was much pleased with Dr. Stewart's paper. I think it deserves our careful consideration, and there are many points in it that would bear further investigation. The doctor's calling attention to early diagnosis is a very important thing, also, the natural tendency or the inherited condition. The doctor stated that tuberculosis is not an inherited disease, which fact is well established at this time. The predisposition, however, is inherited. We have it in the animal the same as in the human family. You take the rabbit and the guinea pig they are naturally tuberculous; the dog and cat are naturally non-tuberculous; the rat is not naturally tuberculous. Now, you take a family of children coming into the school-room, and it is a comparatively easy matter to see which are tuberculous children. The conditions under which they have been reared may have had much to do with developing the condition. I am not sure that nationality has not something to do with it. Six or seven years ago, I made some little investigation on that line. This investigation of mine was conducted through the southern part of Westmoreland county, and the northern part of Fayette, and covered a period of three years. I suppose in all I collected statistics from 150 different families. In regard to the investigation of Dr. Formad, it was my pleasure to be with him a part of the time he was making the investigation. He took the children in the hospital and held *post-mortems* there and examined some of the tissue from all children who were believed to be tuberculous yet had sickness and died of acute diseases, and also from children who had died of tuberculosis. He examined the connective tissue from other children that had died that we believed to be non-tuberculous. and there was a marked change, a marked difference in the lymph channels that fully convinced me that there was more in it than mere theory.

My recollection is that he had modified his views at that time greatly with reference to the cause of the bacilli. He admitted that the bacilli might be the carrier of tuberculosis, and that it might possibly be the specific poison.

The question not settled in my mind is this: are the bacilli, as a rule, one of the early evidences of tuberculosis? Take a subject that is predisposed to it, that has, if you please, the narrow lymph channels, and will you not have a certain amount of engorgement in the lungs before the bacilli? In other words, are the bacilli present before

there is inflammation, or are the bacilli formed subsequently to the inflammation? In regard to the influence of surroundings that has been referred to by both the gentlemen who have spoken. An experiment was made on rats, I do not recall the particular poison that was used, but it made an impression on my mind. A number of rats were caught and kept under favorable conditions; they were injected with specific poison and turned loose in comfortable circumstances under hygienic surroundings. Others were put in a treadmill, where they were obliged to work and kept at it until they were tired. They sickened and died with tuberculous disease. The first lot lived and thrived. But that is only one evidence of many that pure air, pure food and pure surroundings fortify the system against the attack of any disease; I do not care whether it is tuberculosis or something else; if there is a special tendency to tuberculosis, it will likely be that; if there is a tendency to something else, it will likely be that. In regard to the influence of a rarefied atmosphere; I think there is a good deal in that, and we might see why, if we bear in mind the fact, that the apex of the lungs is the portion usually involved first. It is, perhaps, the portion of the lung least used under ordinary circumstances; expansion is less there than at any other portion of the lung.

I have nothing to say as to treatment. In regard to the tuberculin it seems to me that the theory on which it is given will hardly bear us out in using it constantly. I think it is a step in the right direction, yet the question that comes up in my mind is whether or not you can generate a poison from the bacilli that will do what is claimed for the lymph, or that will aid nature in throwing off the diseased tissue. It seems to me we cannot expect much on that theory. As far as I am personally concerned, I want to see some more rational theory advanced or else more satisfactory experience. I have two cases on hand now, and for a month I have debated in my own mind whether or not to advise a trial, and I have not had the courage to do it. The patients are willing and ready to take the risks if so advised, and if there can be anything that will help me to decide, I would be very glad. One of them is a case of tubercular trouble, pulmonary tuberculosis, and the other is a case which Dr. Buchanan saw with me six weeks ago, tuberculosis of the lymphatic glands and the ankle joint.

Dr. Stewart: As to the doctor's remarks in regard to Colorado. A patient came to my office from Colorado recently; he had returned to this city and gone to work. I examined his lungs and found marked consolidation of the upper portion of both lungs. I told him to go back to Denver as soon as he could. I do not think I could have done him any good. With regard to Dr. Rigg's question as to whether the bacilli are present at the early stage. My understanding is that the presence of the bacilli is an essential factor at the initial stage of the disease, and that the tubercular products are the result of the growth of the bacilli.

I would speak a few words of my own results in the use of Koch's lymph. The first case was for diagnostic purposes on a patient in the Mercy Hospital, but he left before a result could be ascertained. The second and third cases were in St. Francis Hospital; both cases were confined to their rooms and the disease was progressing rapidly, both improved at once and have since left the hospital, although still continuing under treatment, and their improvement still continues. The remaining cases were treated in Mercy Hospital; one advanced consumptive did not improve and has since died. Another remained two weeks in the hospital with but slight improvement, but continues the treatment at his home, and is steadily improving. A case of destruction of the nose supposed to be lupus, did not give any reaction even to a dose of twenty-six milligrammes, and was not benefited. I considered the condition as that of an epithelioma. A case of lupus of eyelid at present under treatment gives promise of a cure.

HÆMORRHAGE AFTER LITHOTOMY.

Dr. J. W. Macfarlane: On the 15th of last April, assisted by Dr. Small and the residents of the Western Pennsylvania Hospital, I did a left lateral lithotomy upon Jas. Mehen, removing a mulberry calculus weighing six drachms.

The history of the case is as follows: The lad is sixteen years of age and undersized. His trouble dates back to last July, when he moved to, and secured employment, in Kittanning. The pain and vesical irritation that began to bother him soon after his advent in the place, he attributed to the drinking water, which, he thought, did not agree with him.

In spite of some treatment, his symptoms steadily grew worse during the fall and winter months, when he finally presented

himself to Dr. Thos. McCann, who sounded him and discovered a stone in the bladder. He was sent to the West Penn Hospital, and I operated upon him as before stated.

No trouble was experienced at the time of the operation; there was some bleeding, but no more than is usually seen; the stone was extracted slowly, and the bladder carefully washed out. I saw the patient about half an hour after the operation, and, though I did not examine the bed, I felt the boy's pulse, and left him thinking all was well. About fifteen minutes after this the nurse noticed that he was bleeding freely. Dr. C. B. King, who happened to be at hand, introduced an umbrella-shaped tent into the wound, a catheter forming the center of the tent, and oil silk the outer, the space between the silk and the catheter being packed with cotton. This seemed to arrest the hæmorrhage for a time, but the presence of the catheter and clot in the bladder produced irritation, constant straining, with expulsion of the tent, and a return of the hæmorrhage.

Between three and four o'clock, some three hours after the operation, Dr. King having gone home, I was summoned to the hospital, and on my arrival found my patient with head down and feet elevated; he was pale, sweating, vomiting, thirsty, with a rapid pulse, and in anything but a promising condition. I examined the wound, but was unable to find the source of hæmorrhoge. I removed some clots from the bladder, tried to introduce a fresh tent, but the attempt at introduction produced so much straining that I immediately abandoned it.

I then slipped a piece of gauze, well oiled, over my index finger, introduced it into the wound, and, withdrawing the finger, packed the space as well as possible with absorbent cotton; but this did not arrest the hæmorrhage, the oozing still continuing. The irritation of the bladder being so great as to preclude the introduction of anything within its walls, we concluded to flush the intestines with hot water, and see what effect that would have.

A flexible rectal tube was introduced well up to the sigmoid flexure of the colon, and a large quantity of hot water forced into the bowel. The rectal tube was withdrawn, a pad placed over the rectum and tent (which had been held in position) with a **T** bandage over all. I am happy to say that the effects of the hot water were soon made apparent, the pulse improved, and the hæmorrhage was arrested.

At eight o'clock that night the patient had reacted; there being odor of urine in the bed, the pads were not removed until the following morning, when they were discontinued. Dr. Todd, the resident in charge, kindly sat up with the boy the first night, giving him hypodermic injections of whisky or aromatic spirits of ammonia when required.

The patient, though weak for a time, made an uninterrupted recovery from this on, being absolutely free from pain. On the 28th of April he passed water through his urethra. On the 29th he passed a minute fragment of stone, evidently one of the small points which you will see is missing in the specimen.

The boy was discharged from the Hospital perfectly well on the 15th of May, one month after treatment.

It is probable that the vessel from whence the bleeding came was injured during the extraction of the stone, which is studded with sharp points, as you see, and that it gave way at the time or a short time after the patient was lifted into bed.

Dr. Buchanan: It was my fortune, six years ago, to assist Dr. Kersey in a similar case. At St. Francis Hospital he removed a very large stone through an incision which was probably of necessity insufficient. At all events, there was a great deal of trouble in removing the stone, and, although there was no hæmorrhage at the time, there must have been considerable contusion of the tissues. If I recollect aright, on the sixth day a very severe hæmorrhage came on. Dr. Kersey was sent for late in the afternoon, and I went with him to assist in checking the bleeding. We tried all the ordinary means to stop the hæmorrhage, endeavoring first, of course, to secure the bleeding vessel. The man seemed to be at the point of death, and we were not long in trying the umbrella catheter; but in this instance, at least, it was a dismal failure. A sufficient pressure could not be exerted. We then passed a catheter of considerable calibre as far as the bladder, and put two or three sponge-tents along side of it. The bleeding was instantly checked, and the man recovered.

Dr. Stewart: I have had two cases—one hæmorrhage from rupture of the urethra; there had been several attacks of hæmorrhage, the patient becoming very faint. When I saw him he was bleeding, and there was an opening in the perineum, which had been made to relieve the extravasation. The hæmorrhage was checked by plugging around a silver catheter placed in the perineal opening. The second case was similar to the

first, except that the hæmorrhage was caused by ulceration from prolonged pressure of a silver catheter against the margins of an exploratory perineal opening. The hæmorrhage was checked in similar manner to the preceding case.

SELECTED FORMULÆ.

HERPES ZOSTER.

INTERNALLY.

℞
Ext. gelsem. fl.....3i.
Sod. sulphocarbolat.....3i.
Aquæ q. s. ad.....3iij.
M. Sig.—dr. j every two hours.

℞
Tr. belladonnae.....3ss.
Sig.—gtt. v every two hours until throat begins to feel dry.

EXTERNALLY.

℞
Plumbi acetat.....dr. j.
Aluminisis..... dr. i.
Aquæ q. s. ad..... 3iv.
M. Sig.—Apply to painful part.

—Matthew Beattie, M. D., in New York Medical Record.

FLATULENT DYSPEPSIA.

℞
Magnesia.....
Calcium phosphate.....
Powdered charcoal.....
Sulphur. .....aa p. ac.
A teaspoonful to be taken in water when necessary.

—Provincial Med. Jour.

BALDNESS.

In falling of the hair, a writer in the *Lancet* recommends the following, a little to be rubbed on every night:

℞
Tinct. jaborandi.....3 iv.
Lanolin.....3 iij.
Glycerin.....3 ij.
Mix with the aid of a little soft soap.

TREATMENT OF GOUTY PAINS OF THE GREAT TOE.

The following application should be frequently painted over the painful toe:

℞
Collodion.....5 grammes.
Ether.....5 grammes.
Salicylic acid.....4 grammes.
Muriate of morphine.....1 gramme.
M.

—Journal de Médicine de Paris.

SUBNITRATE OF BISMUTH FOR INFANTILE ECZEMA.

The following is recommended by the *Journal de Méd. de Paris*, May 24, 1891, in the treatment of infantile eczema:

℞
Subnitrate of bismuth.....20 0 grammes.
Oxide of zinc..... 5.0 grammes.
Carbolic acid..... 2 0 grammes.
Vaseline.....30.0 grammes.
M. Sig. Salve, to be rubbed in over the affected parts.

If the itching is severe, the following application will be found of great value:

℞
Subnitrate of bismuth..... 5.0 grammes.
Glycerin.....20.0 grammes.
Carbolic acid..... ... xij gtt.
Rose water.....30.0 grammes.
M. Sig. Shake well, and apply to the affected parts with a soft brush.

TERPINE AND ANTIPYRIN IN THE TREATMENT OF WHOOPING COUGH.

Dr. M. Talamon, in a recent number of the *Medizina*, states that he has found terpine, associated with antipyrin, a most efficacious remedy in whooping cough. He uses the drug in the following formula:

℞
Hydrate of terpine.....1 to 1.50 gramme.
Antipyrin..... 1. gramme.
Syrup of orange-peel..... 50. grammes.
Tolu water..... 60. grammes.
M. Sig. One-half to one teaspoonful several times a day, for children from one to four years of age.

HYPODERMIC INJECTION FOR TUBERCULOSIS.

Pignol, in the *Journal de Méd. de Paris*, May 31, 1891, recommends the following hypodermic injection for the treatment of tuberculosis:

℞
Eucalyptol.....0.14 grammes.
Gaiacol..... .....0.05 grammes.
Iodoform.....0.01 grammes.
Sterilized olive oil, q. s., ad. 1 cubic centimetre.

The daily dose should vary from 3 to 10 or 12 centigrammes.

ECZEMA.

The following is highly recommended for eczema in children:

℞
Bismuth subnit.....3v.
Pulv. zinci oxid.....5j.
Acid carbolic.....gtt. xxx.
Vaseline.....3i.
M. S. Rub thoroughly into the affected parts.

When much irritation is present employ the following:

℞
Bismuth subnit.....3i. gr. xv.
Glycerin..... .....3v.
Acid carbolic.....xij gtt.
Aquæ rosæ.....f3i.
M. S. Shake well and apply with a soft brush.

—Nouveaux Remedes.

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NEVER ROLL A MANUSCRIPT! Try to get an envelope or wrapper which will fit it.

When it is desired to call our attention to something in a newspaper, mark the passage boldly with a colored pencil, and write on the wrapper "Marked copy." Unless this is done, newspapers are not looked at.

The Editor will be pleased to get medical news, but it is important that brevity and actual interest shall characterize communications intended for publication.

LEADING ARTICLE.

ELECTRICAL INDUCTION AS A GERMICIDE.

In the experiments of various investigators of recent date, the attempt has been made to destroy micro-organisms by the application of some physical force. Foremost in this line are the experiments of Koch, and his pupils, with heat; who have made a most extended and exhaustive series of experiments.

D'Arsonval and Dubois have, in the meantime, turned their attention to magnetism, while Cohn and Mendelsohn have carefully tested the effect of the galvanic current upon the life of microbes. In galvanism, however, the results can very possibly be said to be due to chemical action, the current changing the nature of the fluids with which it comes in contact, and transforming them into germicides. According to the majority of investigators, a specific action of the galvanic current cannot be proven.

Recently, Drs. Spilker and Gottstein, of Berlin, have been experimenting with a method as yet untried by other investigators, and in which the simultaneous actions of other forces, either caloric or chemical, is absent, as are also the changes which might be produced by electrolysis.

The force used by Drs. Spilker and Gottstein, has an electrical induction current, the experiments being conducted in the following manner. The fluid containing the culture was placed in a glass test-tube wound about with a wire coil, through which an electrical current, either from a dynamo or from accumulators, was allowed to pass. Subsequently, vessels of clay were used in place of glass test-tubes. The electrial current did, indeed, produce some degree of warmth in the substance which was being tested. The increase of temperature thus produced never, however, exceeded 36.6° C.

Experiments were first made with the *micrococcus prodigiosus*, cultures of which were floated in water. This mixture was treated with a current of 2.5 amperes + 1.25

volts. The treatment lasted for twenty-four hours, during which time the temperature of the mixture never went above 30° C. The results showed that complete sterilization had been effected. However, the destruction of the micrococcus prodigious by induction could only be accomplished when the cultures were floated on or mixed with water. Gelatine or agar cultures were unaffected by the current. Various nourishing substances were added in other experiments to the watery mixture, but in this case, as in the first, the mixture was rendered sterile by the current. Other micro-organisms were tested with similar results.

The experiments, therefore, justified the conclusion that in mixtures of micro-organisms with water, the electrical current produced by induction was able to destroy the micro-organisms after a certain time.

The same results were, however, not obtainable with micrococci in milk, although the current seemed to delay the development of the bacteria in this medium for several days, and the number of colonies would also decrease. Beer (Weissbier) gave the same results as water.

Regarding the strength of the current, from 10 to 12 amperes were used in tubes of 3.5 centimetres in diameter. The duration of the current is a most important feature. In treatments lasting only one hour sterilization was never obtained, there being only a decrease of the number of germs, but no weakening of their activity.

Further experiments showed that when the water containing micro-organisms was agitated during the treatment the action of the current was quicker than when the mixture was undisturbed. The hopes expressed by the authors in their article in the *Centralblatt fur Parasiten-Kunde*, viz., that their method would find practical value in the sterilization of water supplies, were not realized, inasmuch as the application of a current for a continued time would involve too great a cost.

The action of the induction current upon micro-organisms in the blood, was more favorable even than that in water. In a comparatively short time pathogenic micro-organisms can be rendered innocuous by such a current. Blood and water, containing pathogenic germs, were rendered sterile by the induction current in from five minutes to a half an hour. Subsequent inoculation of mice with this mixture thus treated proved it to be absolutely innocuous. The authors were of the opinion that the iron in the blood played an important part in the results, since the induction current and magnetism are so closely related. Acting upon this thought, they added to the mixtures various salts of iron. While the sulphate, lactate and citrate, seemed to produce no change, the albuminate of iron exerted a most powerful influence.

If solutions of 1:1,000 of albuminate of iron were added to a watery mixture of micro-organisms, a current lasting only ten minutes would cause a sterilization which would last for eight days. After this time, however, colonies would slowly form.

Spilker and Gottstein believe that this action of the albuminate of iron is due to what Pfeffer and Buchner designated as a *chemotactic* property of certain micro-organisms.

At all events, their experiments show that with the addition of albuminate of iron to organic fluids or tissues, we have in electrical treatment by induction, a valuable agent, capable of suspending or checking the production of micro-organisms.

The therapeutic value of these experiments remain yet to be tested. Their hygienic value is, however, very evident, viz., the preparation of various foods or drinks; and it is with this subject that the authors are at present at work. Already they have shown white-beer (Weissbier) treated by electricity will keep much longer than beer not so treated. Butter also, after being treated, will preserve a fresh appearance and taste for weeks. The untreated butter, at the end of two weeks, was found to contain 30 per cent. more of free acid than that which had been subjected to the current.

The action of the current on fluids out of the body and on those in the living organism

are totally different. While in the former instance the current may be active, in the latter it is valueless. Inoculated mice were placed in clay tubes, but even a prolonged application of the current produced no result. Even when the wire was wrapped directly around the vessels of the animal the effect of the inoculation proceeded unchanged, and would finally cause the animals' death.

Perhaps the many fervent advocates of electrolysis in gynæology may find some food for thought in these experiments, which are surely of more than ordinary interest, and may very possibly result in a better understanding of the value of electricity in therapeutics, especially so in the treatment of tumors.

Book Reviews.

FEVER—ITS PATHOLOGY AND TREATMENT BY ANTIPYRETICS. By Hobart Amory Hare, M. D., B. Sc. Philadelphia and London. F. A. Davis, 1891.

This work has already attained some reputation, being the essay to which was awarded the Boylston Prize of Harvard University in 1890, its title at the time of presentation to the Committee being The Uses and Values of Antipyretics.

As the author says in his preface, "it would be difficult to find any theme about which so much has been written in the past ten years as the subject with which this essay deals," and yet we know of no one work in which the results and conclusions obtained by so many of the best observers are so concisely summed up as here. Not only has it been the author's aim and duty "to gather up the good grain from the tares rather than to bring before the readers for his examination the entire crop of communications as a garnered harvest," but he has added accounts of a number of his own experiments, which help to clear up doubtful points about the drugs under consideration. Points of especial interest to the practising physician will be the study of the pulse tracings, the tables showing the cases in which untoward effects have occurred from the use of the various antipyretics, and the chapter in which the author gives a comparative summary of the practical value of the different agents for the relief of different conditions or symptoms. It will surprise most reades, no doubt, to find how rarely fatal effects have occurred from the use of modern antipyretics, though often "the symptoms seemed to be severe."

The book is in Dr. Hare's best style and will be eagerly read by any one who begins its perusal.

THERAPEUTIC HANDY REFERENCE BOOK FOR PHYSICIANS—WM. R. WARNER & CO., PHILADELPHIA. 1890.

This little book, well termed "handy" and now in its third edition, with several additions and improvements over previous ones, contains much information useful to physicians. Commencing with a table of weights and measures, arranged in both English and French terms, it continues with a short talk upon prescription-writing, an extensive posological table which gives also the physiological action in brief of each drug. Succeeding this are a few generalizations intended to aid the memory for the doses of the various preparations, and then some directions regarding hypodermic medication, with formulæ. "Incompatibilities." "Poisons and their Antidotes." Marshall Hall's Method of Artificial Respiration," "Signs of Pregnancy," and a table of the digestibility of foods, as well as one for calculating the duration of pregnancy, follow in the order given. The book ends with "Directions for making post-mortem examinations," and numerous medical formulæ.

Thus, as has been said, the book is filled with useful information, and will doubtless be of value to many physicians, as a compact and ready reference pamphlet.

TREATMENT OF SYPHILITIC ULCERATIONS.

Plumert gives the following applications for ulcers of syphilitic origin:

℞ Mercury salicylate.....xv gr.
Potassium carbonate.....xv gr.
Distilled water.....℥vj. M.
Dissolve. Sig. Wet compresses with this solution and apply to the ulcerations.

If an ointment is preferred, recurrence may be had to the following:

℞ Mercury salicylate..... xv gr.
Vaseline.....℥ j.
M. and make a pomade.

—*Bacteriological World.*

PERISCOPE.

THERAPEUTICS.

A NEW TREATMENT OF HYSTERIA.

Of all diseases of the nervous system that which the physician meets most frequently is hysteria. It has been the custom to look upon this disease as something rather mental than physical in its character, to suppose that the victim was not diseased as much as shamming, so much so that the laity has come to regard the diagnosis of hysteria almost as an insult—an indication of a feeble mind. He would, nevertheless, earnestly protest against such a misconception. There can be no question that in hysteria we have to deal with a physical disease, and not an imaginary malady. Its symptoms may be divided into two distinct groups: (1) the mental; (2) the physical; and their severity may be entirely out of proportion to each other. In one case the mental signs may predominate; whereas in another almost none of the mental peculiarities we usually encounter may be present, and only a careful physical examination may lead to a proper diagnosis. Hysteria depends upon a condition of increased irritability of the entire nervous system, involving the brain, the spinal cord and the sympathetic. The result of this is that causes which under normal circumstances produce only a slight or transitory effect, lead to more or less permanent manifestations.

All the symptoms of hysteria are met with in a far less developed form in healthy individuals under certain conditions. It is evident that laughing and crying so often seen in the hysterical, is simply an exaggeration of that condition in the normal. The paralyses of hysteria even have their analogy in the inability of speech or to move, occurring under the influence of severe emotion, and the convulsion of hysteria is only an exaggeration of the tremor that we see ordinarily associated with fear and anger. The peculiarity of the hysterical subject lies in the excessiveness of the reaction. What causes this increased irritability is unknown, but it must be some anatomical change even if only a molecular one. Whether that alteration be seated in the entire nervous system, or whether it be located in the sympathetic, that unexplored accessory system, we do not know. That the sympathetic may play a more important role than has hitherto been proven is by no means improbable, and he leaned to that interpretation of the etiology of the disease. So many of the signs of hysteria are associated with secretory and vasomotor changes, and so many can be explained by unilateral vasomotor changes in the brain, that this theory is quite seductive.

It is one of the peculiarities of hysterical paralyses that they are unilateral, involving the upper and lower extremity, but leaving the facial nerve intact, that they are accompanied by anesthesia, but involving the head and face as well, not only of the skin, but also the special senses—hearing, sight, smell and taste. At the posterior portion of the internal capsule, between the lenticular body and the thalamus opticus, we have all the fibres collected that supply these parts, the facial nerve running more anteriorly. This region is supplied by the anterior choroid artery, a branch of the middle cerebral not anastomosing with other vessels. The anterior part of the internal capsule is supplied by the posterior communicating artery, drawing its blood supply from the carotid and basilar arteries through the posterior cerebral. A vacomotor disturbance which would cause a marked anæmia in the territory of the anterior choroid artery could not do so in that of the posterior communicating. Hence a paralysis due to anæmia arising from arterial spasms would not effect the latter region, and the facial nerve would not be disturbed. This was probably what occurred in hysteria, and was a very strong argument in favor of the speaker's opinion that hysteria is due to a lesion of the sympathetic nerve. [The speaker here domonstrated a brain in which the anterior choroid artery had been injected with carmine, showing the posterior portion only, of the internal capsule, red.] It has been rightly held that in this disease from alteration of the sympathetic nerve, a spasm of the arteries in certain parts first occurs, followed by a relaxation with œdema, the latter making the symptoms so permanent. We see the same œdema in hysteria in various parts, and a special form of it occurring in the hands and attended with cyanosis, has been lately described by Charcot as the blue œdema of hysteria.

The speaker desired to direct attention to some of the phenomena which may have escaped notice that are of great importance in making the diagnosis, and in determining whether or not the disease has been cured. These interesting symptoms are the sensory. If you examine a typical case of hysteria, you will find that the sensibility to pain, as the prick of a pin, is entirely lost on one side and that the disturbance is sharply cut off at

the median line, whereas, on the other side, the slightest prick is painful. This analgesia involves one-half of the head, neck and trunk, and the upper and lower extremity on that side, and you will also observe that the puncture on the analgesic side does not draw blood. You may find the sense of touch, pressure and temperature defective, and hearing, smell and taste may be entirely absent on the same side. In examining the eye, very peculiar symptoms are likely to be met. There is frequentiy a contraction of the field of vision in both eyes, but usually more marked upon the side upon which the sensory disturbances are found. The contraction is uniform in all parts of the field of vision. This contraction may become so great as to produce complete blindness. Another anomaly of the hysterical eye is the disturbance of color vision; the sensibility of the retina to various colors may become seriously involved, leading to complete color blindness.

A further peculiarity of hysteria is the presence of certain zones which are hyperesthetic, and pressure upon which brings forth either a complete hysterical attack, or some of its signs. The most frequent position of this hysteriogenic zone, as it is called, is the lower lateral abdomen, that termed the ovarian region. Pressure here is almost invariably sensitive in case of hysteria, and this is true of males as well as of females, proving that the ovaries have nothing to do with the symptom. For convenience it is called ovarian tenderness, but is probably produced by the sensibility of the sympathetic nerves, which are so generously distributed in that region.

Acting upon this fact, and influenced by his belief that the sympathetic is the seat of the hysterical lesion, the speaker has applied the constant current to that region in the treatment of that disease, and had met with most flattering success. Feeble currents had at first been used, but in this, as in other diseases of the nervous system, it was soon found that large doses are necessary. He had used currents from 20 to 60 milliamperes, applied for about five minutes. One pole high up the back, and the other, usually the negative, to the sensitive ovarion region. The electrodes were 6x12 cm. in size and thickly stuffed with compressed moss. In order to make it impossible to employ these strong currents, he used a very delicate rheostat, with resistances from 0 to 200,000 ohms, which enabled him to turn the current on and off so gradually that there was no shock, and permitted the use of strong currents without pain.

In nearly every case, the effect was an immediate improvement in all of the symptoms after very few applications, and, in the vast majority, complete cure, not followed by relapse. That the cure was due to the physical action of the electricity, and not to the imagination of the patient, he proved by the fact that in many instances he led the patients to believe they were taking electricity, whereas, no current was passing, and, in every such case, no benefit resulted from the imaginary treatment. He considered only those cases cured in which the subjective symptoms of despondency, *globus hystericus*, weight of the chest, numbness of the extremities and hysterical attacks had disappeared, and in which analgesia, loss or impairment of the special senses, and sensibility of the ovarian regions could not be found.—*Occidental Med. Times.*

TURPENTINE AS A GERMICIDE AND ANTISEPTIC.

Dr. W. Schleppegrell, in the *Medical News*, says, although the oil of turpentine (*Oleum Terebinthinæ*, U. S. P.) is not unknown as an antiseptic and germicide, its insolubility in water and its irritating properties have hitherto made its use impracticable. That it has its special uses, however, in this connection I have had abundant testimony.

It is a well-known fact among naturalists, that, if the air of a cabinet be impregnated with the vapor of turpentine, the specimens are safe from the ravages of moths and other intruders so long as this condition of the air of the cabinet remains.

Having learned the advantage of turpentine in preserving entomological specimens, I concluded to try its germicidal properties in the cases containing surgical instruments. A bacteriological examination of the cases, made four weeks afterward and compared with the examination of cases not provided with turpentine, convinced me of its efficiency, and I soon afterward applied the same principle to drawers containing towels, gauze, bandages, etc.

The method is simple. The turpentine is placed in flat, large-mouthed bottles at the bottom of each case or drawer, the volatility of the turpentine causing the vapor to impregnate the surrounding air.

Of late I have also placed my surgical instrument, the night preceding an opera-

tion, in a flat dish containing oil of turpentine. The instruments are completely sterilized, are not injured by the submersion, and are easily dried by a piece of sterilized gauze or towel. The characteristic odor of turpentine can be removed by ether.

The cheapness of turpentine and the ease with which it may always be obtained, added to its special adaptability in preserving the aseptic condition of instruments, bandages, etc., by its vapor, may make it a valuable addition to the list of our antiseptics and germicides.

I have also used benzole in the above manner. Its greater volatility gives it a more rapid germicidal action than turpentine, but its great inflammability admonishes caution in its use.

POISONING BY BELLADONNA PLASTER.

Mrs. W., aged 23 years, was confined four months ago. The baby was nursed till three months old, when it was thought advisable to "dry the breasts." The patient applied belladonna plasters to the breasts, and she was told not to interfere with them till they fell off themselves. Being on a visit to friends and not feeling well, she was brought to see me on February 28th. She was very pale and anæmic, complaining of frontal headache, dimness and haziness of sight, dryness of mouth and throat, thirst, and loss of appetite. She remarked that her breasts were sore, and that there was a disagreeable smell proceeding from them. On examination I found that she had two filthy sodden plasters on her breasts. When these were removed the skin presented a well-marked pustular eczematous condition over the area covered by the plasters, from which a very offensive odor of decomposing matter emanated. Over the arms and forearms on both extensor and flexor surfaces and over the front of the knee-joints, the lower fifth of the thighs, and the upper fifth of the legs there was a rash of a distinctly uticarial type, attended with considerable itching. The pupils were widely dilated. The breasts were ordered to be bathed with hot water, and then smeared over with vaseline. I saw the patient on March 3rd, and found all the symptoms quietly subsiding.

Amongst the frequenters of out-patient departments it is no unusual thing to see these offensive plasters on the breasts. Far more efficacious and cleanly applications are the liniment or the extract of belladonna rubbed up with glycerine, the breasts to be carefully bathed with hot water night and morning. In cases of pleurodynia and myalgia these applications, when rubbed into the skin, besides being cleaner, give more immediate and permanent relief than the plaster on account of the accompanying massage.

Dr. P. Rhys Griffiths, in *Brit. Med. Jour.*

BROMOL.

This is the name recently given to the well-known compound, tribromophenol, which is produced when phenol or carbolic acid is treated with an excess of bromine in aqueous solution. It has been found to possess strong antiseptic properties, and to be, at the same time, non-toxic.

Rademaker has recommended it for external use, either dissolved in olive oil (1 in 30) or mixed with vaseline (4 in 30). It may also be applied in form of powder, like iodoform, for sprinkling on wounds. In diphtheria or angina due to scarlatina, the throat may be touched with a solution of 1 part of bromol in 25 of glycerin.

The same author has used the substance internally in doses of $\frac{1}{12}$ to $\frac{1}{4}$ grain, in cholera infantum and typhoid fever with success.—*Chem. Centralbl.*, No. 21.

A CASE OF POISONING BY CAMPHOR.

Dr. Sydney E. Atkins, in the *Brit. Med. Jour.*, says, he called one day to see C. A——, aged five, who, he was informed, had swallowed some spirit of camphor. On arrival, he found the child lying on the sofa deeply convulsed, pupils widely dilated, pulse 120, very weak and small, extremities very cold and face livid. From what he could gather, about two and a half or three drachms of spirit of camphor had been taken, which would represent about fifteen or eighteen grains of the pure drug. He immediately gave an emetic of mustard-and-water, followed by, as soon as he could obtain it, half an ounce of ipecacuanha wine. This produced vomiting of lightish brown fluid, having a strong smell of camphor. Hot flannels were applied to the feet, and as soon as the vomiting ceased two teaspoonfuls of castor oil were administered. The patient made a rapid recovery, with the exception that for the next two or three days she complained of nausea and pain in the epigastrium, and was unable to retain anything in the stomach but a little beef-tea or soda-and-milk. This he attributed to a slight attack of gastritis.

MODERN DERMATOLOGICAL REMEDIES.

The following information respecting some of the newer forms of external remedies used in the clinic of Professor Hebra, Vienna, is published in the *Pharmaceutische Post:*

Spray Treatment.—Very frequently an ether spray is used as a vehicle for mercuric sublimate (1 to 2 per cent.) and chrysarobin (10 per cent). It is considered that the spray, besides its anodyne properties, presents the advantage of attacking affected parts otherwise difficult to reach, such as those covered with hair. Whilst the mercuric chloride spray does good service, principally in affections of the mucous membrane, the chrysarobin spray is used in mycosis of the skin. The apparatus used is one combined with a ball blower.

Medicated Soaps.—The superfatted medicated soaps introduced by Unna are used in a form as improved by Eichhoff. The basis consists preferably of beef tallow, together with Liquor sodæ two parts, Liquor potassæ one part, and some olive oil. The superfatted soaps employed are the resorcin-salicylic, resorcin-salicylic-sulphur, resorcin-salicylic-sulphur-tar soaps. In these forms the resorcin is claimed to develop advantageously its action antagonistic to inflammation; the salicylic acid is said to dissolve the horny layer of the epidermis and to act as a bactericide; the sulphur also lowers the inflammation; while the tar diminishes the itching and favorably influences the dilated vessels.

Glycerinum Saponatum.—This is an ointment basis, containing a large proportion of glycerin, in the preparation of which a small quantity of a neutral cocoanut-oil soda soap is used. Its composition varies from 80 to 92 per cent. of glycerin and 20 to 8 per cent. of soap. The glycerinum saponatum is soluble in cold and warm water, and is said to possess the advantageous property of dissolving a large number of substances, and of holding other insoluble pulverulent substances in suspension. To this class belong:

A. Ointments with an Acid Basis (80 per cent. glycerin).—(1) Glycerinum saponatum with salicylic acid (5 per cent,), employed especialiy for the removal of horny epidermal growths; (2) Glyc. sapon. with salicylic acid (5 per cent.) and resorcin (5 per cent.) combines the properties of the preceding with those of resorcin in diminishing the inflammation, acting as an antiseptic, and promoting the regeneration of the epidermis; (3) Glyc. sapon. with salicylic acid (5 per cent.) and creosote (5 per cent.) promotes healing without pain in lupus vulgaris, lepra, etc.; (4) Glyc. sapon. with salicylic acid (3 per cent.) and tar (10 per cent.), useful in scaly eczema with itching.

B. Ointments with a Neutral Basis (92 per cent. glycerin).—(1) Glyc. sapon. with zinc oxide (5 per cent.), used for cosmetic purposes and in slight cases of eczema; (2) Glyc. sapon. with sulphur (10 per cent.); (3) Glyc. sapon. with zinc oxide (10 per cent.), used in acne; (4) Glyc. sapon. with iodoform (5, 10, to 50 per cent.), said to be remarkably active, purifying and promoting granular action in wounds, ulcers, buboes, and carbuncles; (5) Glyc. sapon. with chrysarobin (10 per cent.), approved especially in psoriasis; (6) Glyc. sapon. with hydroxylamine (1 per cent.), used in psoriasis of the face and hairy scalp; (7) Glyc. sapon. with ichthyol (5 per cent.) renders good service in violent itching of skin affections and arthritic swelling of the joints; (8) Glyc. sapon. with ichthyol (10 per cent) and zinc oxide (10 per cent.), as in the preceding, and in incipient eczema; (9) Glyc. sapon. with carbolic acid (2 to 3 per cent.) is good for disinfecting the hands and also to relieve itching.

In other cases the vehicle represents a kind of dressing. Among the *Pastes*, the zinc-starch-vaseline paste, with corresponding medication, takes a high place. This paste is used with good result in combination with salicylic acid (acid. salicyl., 1–2; zinci oxidi et amyli, aa 25; vaselini, 50). The paste adheres to the face without any bandage; it is also dusted with starch. In the *Traumaticin* treatment, traumaticin (a solution of 1 part of gutta-percha in 10 to 15 parts of chloroform) is used as a medium for applying different remedies, such as chrysarobin, etc. It forms a pliant coating, and surpasses collodion by far in this respect.

Glycero-Gelatin is prepared in three forms: soft (5 per cent. gelatin added), hard (10 per cent. gelatin and water), and hard (10 per cent. gelatin without water). Before using, the preparation is liquefied by heat, and in this condition is spread on to the part affected, by means of a brush, and covered with mull.

In the preparation of ointment and plaster mulls, Unna's recommendation is followed to substitute lard by mutton fat, which renders unnecessary addition of paraffin or wax. The dressings are dipped into the melted mass, dried, and rolled up. The gutta-percha mull is considered to present many advantages.

A new kind of dermatological plaster has been introduced, the basis of which consists

of purified india-rubber and anhydrous lanolin worked up together to a remarkable adhesive mass. The mixture is medicated with various substances and spread upon linen, and it is then known as *Collemplastrum.* Among the advantages claimed for this kind of plaster are its low cost; that the mass does not separate from the linen; that, while possessing the adhesive properties of india-rubber plaster and lanolin, it favors the absorption of the added medicament; and that the plaster can be readily removed without leaving portions adherent to the skin. Besides the simple Collemplastrum adhæsivum, others are used, containing respectively 10 to 20 per cent. salicylic acid, 30 per cent. pyrogallic acid, 60 per cent. mercury and 5 per cent. carbolic acid, 50 per cent. thiol, 40 per cent. zinc oxide, 10 per cent. liquid pitch, etc., etc.—After *Pharm. Journ.*, May 23d.

MEDICINE.

THE RELATION OF CHOREA TO RHEUMATISM AND HEART DISEASE.

P. Meyer, in *Berliner Klin. Wochen*, gives an account of 121 cases of chorea treated in Hinoch's clinic during the past five years. In nine per cent. of the 121 cases there was a history of rheumatic symptoms, and in ten per cent. heart disease without any rheumatic symptoms was made out. In two per cent. of the cases both heart disease and rheumatism were present. From these statistics the author concludes that chorea is merely a symptom which can be induced by the most varied causes. This, however, is only a partial representation of this subject. Any hypothesis which does not take into consideration the functional predisposition to chorea cannot be accepted as adequate to explain its nature. This functional predisposition is necessarily always present. It essentially consists in the want of a due stability in certain motor areas. It is the element in chorea that is inherited, and without which the disease cannot be brought about. It is true that it is possible to have an acquired instability of certain cortical areas, as the result of many diverse injurious influences. Given this instability of the motor cortex, the causes that may induce choreic movements are very various. In one case it may be simple emotion, in another any internal or external poisonous agent. In the latter class may be included the poison of rheumatism. This poison then induces not only this disease, but the chorea and endocarditis. There are no grounds for entertaining the opinion sometimes expressed that chorea causes endocarditis. When the three diseases appear in the one case, it is more than probable that they are induced by some poison, either the rheumatic or allied poison, and in such cases the proper treatment is the treatment of the rheumatic state.—*Amn. Gyn. and Ped.*

VACCINATION AS A PREVENTIVE OF INFLUENZA.

Dr. Goldschmidt, of Madeira, hopes to conquer influenza by means of animal lymph, as re-vaccination against small-pox seems to confer almost perfect immunity from influenza. In consequence of the neglect of vaccination, small-pox prevails frequently in Madeira, and not long ago it carried off more than 1,000 victims. The doctor went in for re-vaccination, and now finds that not one patient out of 112 successful cases suffered from influenza, and out of 98 unsuccessfully vaccinated, only 15 persons were seized by the influenza, and these in each case but very slightly. Recently vaccinated infants did not catch the influenza. It therefore appears to follow that re-vaccination gives effective protection not only against small-pox, but also against influenza.—*British and Colonial Druggist.*

PHAGOCYTOSIS AND IMMUNITY.

The fact that one attack of a contagious malady, such as small-pox or scarlet fever, renders an individual immune against a second attack has never received adequate explanation. It is even more difficult to explain satisfactorily the immunity conferred on an animal by inoculating it with the attenuated virus of a disease which in its ordinary form is often, and in a few cases invariably, fatal, such, for instance, as protective inoculation for anthrax, chicken cholera, and the older method of vaccination to protect from or modify an attack of small-pox (*The British Medical Journal*). In a lecture recently delivered by Dr. Metchinikoff at the Pasteur Institute, an attempt is made to prove that the defending powers exercised by the amœboid cells of the organism are in a large measure concerned in conferring this immunity, The aggressive characters of these amœboid cells has earned for them the name of "phagocytes," and Metschnikoff points out that they are of difierent kinds, and originate in various ways. In connection with the subject of immunity, it is im-

portant to remember that these phagocytes can include and destroy micro-organisms; but the more malignant the micro-organisms the more rarely is it found within the phagocyte, and this is especially true of such diseases as chicken cholera, hog cholera given to pigeons and rabbits, and anthrax of mice. All these diseases have the character of general acute septicæmia and cause death within twenty or thirty-six hours. According to the views expressed in this lecture, we are to believe that when the micro-organisms are attacked by the phagocytes, an animal may recover from the disease. In the malignant forms, where the phagocytes do not intervene —that is, phagocytosis or amœbic warfare is not established—then the bacteria overrun the organism, and induce death. This partiality of the phagocytes is attributed to their sensitiveness to external influences, and especially to the chemical composition of their environment. These cells are powerfnlly attracted by many micro-organisms, and repelled by others. This attraction and repulsion are expressed by the terms "positive chemiotaxis" and "negative chemiotaxis." Now the basis of the theory appears to be that the chemiotaxis of the phagocytes of a given animal is mutable, and that cells may be gradually attracted to substances in a mild form from which they shrink when presented to them in a concentrated form. Hence by inoculating an animal with an attenuated virus the chemiotaxis, previously negative, will acquire positive characters, and at last be induced to attack the micro-organism of a malignant disease should occasion arise. Any attempt to explain immunity from infectious diseases on a rational basis will be very welcome. The theory propounded by Metschnikoff, is, like all the previous communications made by him on the subject of intracellular digestion, the outcome of patient and illustrious observation, and must command our attention. His views, formulated for the first time in a consecutive manner in this lecture, promise to revolutionize opinions as to inflammation and fever, and this attempt to explain the power of the cells to confer immunity from infectious diseases is sure to be hotly contested, for every important contribution to this confessedly obscure subject must necessarily be in a large measure hypothetical—*Med. Presse.*

THE DIAGNOSIS OF INCIPIENT MELANCHOLIA.

Dr. S. Grover Burnett, writes: Insomnia is present in some degree in all the forms of melancholia, being more marked in simple melancholia and melancholia agitata than it is in melancholia attonita, and melancholia with stupor; this would suggest again that the nuchalalgia was playing its part here in the role of production. I do not mean to assert that it is necessary at all times to have the nuchalalgia present in order that there may be insomnia, for I believe the delusions are often sufficient to keep patients awake. I have often, while making my rounds of the wards, at all hours of the night, had occasion to observe this condition, and it has not been uncommon to find these patients wide awake, with no indications of having been asleep.

Why are diagnostic symptoms important in incipient melancholia?

As I have said, it is in the early periods of the disease that it is so frequently improperly diagnosticated, and it is the inherent tendency of these very cases to become homicidal and suicidal. Such instances as these are the very ones that fill our daily newspapers with tragic sensationalism, and leave the general public wrapped in the mystic thought of some dastardly deed, which has simply been the outgrowth of a depressed and melancholy mind. Such an occurrence as this—which, I am sorry to say, is more common than you would imagine—is sufficient to point out to us the importance and usefulness of any symptom or group of symptoms that will lead to the recognition of a mental derangement which, sooner or later, will bring crime to the eyes of the public; humility, distress, and perhaps death in private life.

This propensity to take life may come upon them suddenly, or be gradual in its development. I recall the case of a large, heavy man, who was determined to take his life. In conversation he would reason quite well on many things, and when alone he would be seized with a fit of depression and a desire to kill himself. Notwithstanding he was closely watched, he evaded his attendant and threw himself head first down a stairway. He reasoned that the weight of his body, falling from a height on his head, would produce death. Unfortunately for him, he struck his head a glancing blow, as he jumped hurriedly and at an angle, rather than perpendicularly. He suffered from concussion of the brain, but survived his injury. All cutting and sharp-pointed instruments had to be taken from him. Shortly after being able to leave his bed he again evaded his nurse, and this time he jumped from the railing of a high piazza, head first, and, as he had reasoned, his weight was suf-

ficient to drive the cervical vertebræ into the base of the skull, producing instant death.

It is not uncommon to see melancholiacs whose real condition has not as yet been recognized awaiting some suggestion through which they may be able to carry out their morbid tendencies. A case of this kind was that of a gentleman who was noticed by his associates to be somewhat depressed. They thought to chide him a little and "drive away his blues," when he remarked he wished he was dead. One of the company carelessly remarked: "Go throw yourself over the stair railing." He deliberately carried out the suggestion before any of them had time to interfere. He fell through three floors on to a tile floor, killing himself, of course.

Suicidal and homicidal acts are frequent results of disappointed love affairs, and in these instances the real melancholia, which is undoubtedly secondary to the extreme disappointment and is responsible for the act, is often never recognized till it is too late.

Such occurrences are so common that it is useless to take up more time in illustrating this feature of melancholia, which is deserving of being considered an early diagnostic symptom, and is important both to the practitioner and to the neurologist. From a therapeutic and diagnostic standpoint it cannot be otherwse than recognized as of great efficacy. To arrive at a proper diagnosis. based upon various forms of depression, is not always an easy matter, for we find depression presenting itself in a variety of forms, each of which is dissimilar in its origin. Mental depression may be the initiative symptom of any form of mental disease, and, again, it may exist independent of any mental affection whatever. Gastric disorders often give rise to marked depression, also hysteria, hypochondria, and conditions of sadness. A differential diagnosis here is important, but not always easy to make. If the depression exists in connection with nuchalalgia and insomnia, the rest is easy.

Therapy, of course, should be based on the diagnosis made; hence, with a history which is in keeping with the presence of insomnia, the ache, and depression, we should feel quite positive as to what we have to deal with, and should institute precautions of safety and therapeutic measures at once. By this early interference I believe much mental aggravation and distress may be saved; but, in order to do this, it is essential for the physician to be conversant with the case and to have *entire* control, so that his instructions will be carried out in full.

As students about to enter into your new field of duties, I trust you may give this matter due consideration, for my clinical experience has taught me the value of these symptoms given you, and, since I have learned that they are ardently advocated as *clinical facts* by one so able as Dr. Gray, I am proud to have the privilege of presenting them to you for the first time.—*N. Y. Med. Jour.*

SURGERY.

WOUNDS OF THE INTRA-CRANIAL SINUSES.

Dr. W. T. Briggs in a paper upon this subject said that it is one which had not received from authors the attention its importance demanded, and that very little indeed had been written upon the subject. In many standard works upon surgery no reference whatever is made to it. He did not propose to shed additional light upon this neglected subject, but simply to give his impressions from the study of a number of cases of injuries of the sinuses which had fallen under his observation. The following is a summary of his paper.

The dural sinuses are so well protected by the tutamina cerebri that they are not often the subject of wounds. Occasionally an injury inflicted on the surface of the cranial walls without a lesion of the bones, or even of the scalp, may rupture a sinus and produce a fatal internal hæmorrhage.

A blow or fall may fracture the skull at one point and lacerate a sinus situated at a greater or less distance from the point of a fracture. More often a sinus is wounded by a sharp-pointed fragment of bone in comminuted depress fractures, or by the penetration of the skull by pointed or sharp-edged instruments, or by gun-shot wounds. Occasionally the sinuses are opened by the pointed teeth of the trephine.

The older writers upon surgery warned surgeons to avoid the situation of sinuses in the application of the trephine. Modern authors do not hesitate to advise the use of trephine directly over the sinuses if necessity demands. He had often removed sections of the skull an inch or more over sinuses with Galt's trephine, without injuring the vessels.

The result of such wounds depend on the character of the lesion. When a large opening is made in a sinus, the hæmorrhage, if not promptly restrained, may prove rapidly fatal. When the opening is direct and not large the hæmorrhage may be easily checked by appropriate means. When the blood does not escape through the external wound

but accumulates in the skull, compression of the brain ensues.

The entrance of air into sinuses, though they are calculated by their anatomical construction, is not of frequent occurrence.

The hæmorrhage arising from an open wound of a sinus may be easily controlled, and the opening permanently closed by prompt and appropriate treatment.

When the hæmorrhage is concealed and symptoms of compression arise in consequence, the trephine should be used for the removal of bone over the wounded sinus, that it may be properly treated.

The means that may be used in the treatment of wounded sinuses are, 1st, The encircling ligature; 2nd, The lateral ligature; 3rd, Suture; 4th, Acupressure; 5th, Forcipressure; 6th, Direct compression.

1st. The ligature might be used with success in arresting bleeding from sinuses, but the usually small opening in the skull and the consequent difficulty of placing it is an objection. Besides other means more easily used are equally effective.

2nd. The lateral ligature has proven effective in the hands of some surgeons but, in my opinion should not be restored to because its action is uncertain. It is very liable to slip and give rise to secondary hæmorrhage, besides it does not put the parts in the best condition for healing.

3rd. The edges of an opening in a wounded sinus may be closed and all bleeding stopped by saturing the edges of the wound with aseptic silk. When there is free space for work the suture is very effective, and may be practised with great confidence. In the application of the suture it is necessary that the intima should be brought in contact, which can be best accomplished by the continuous through and through stitch instead of the glover suture.

4th. The value of acupressure in controlling bleeding in these accidents is undoubted. The passage of a pin through the sides of the dural opening and the application of a thread thrown over the pin will effectually control the hæmorrhage. The compressing pin does not irritate and need not be retained very long.

5th. Forcipressure is also a valuable measure in the treatment of hæmorrhage from wounded sinuses. It is easy to grasp the mouth of a gaping sinus with hæmostatic forceps and leave it in situ until it produces permanent obliteration of the wound. It is complete and effective.

6th. The remedy to which I call attention last is by no means the least valuable means in our possession. Indeed, in my opinion, it is entirely sufficient to control any bleeding from wounded sinuses, and I have invariably depended on it in all the cases I have treated. I refer to direct compression. A small dossil of aseptic gauze or cotton is to be placed directly over the wound in the sinus, a small compress is then to be placed over the pledget, the flap of skin is then to be drawn over these, a compress over the flap so as to be retained by a well-adjusted bandage. The bandage and the external compress may be removed in a few days, but the internal compress is not to be disturbed until it is loosened by the discharges from the wound, or better still, until it can be washed away by a gentle stream of water. I do not think a better device can be utilized for the purpose. It is scarcely necessary to say that the treatment of wounds of the sinuses after hæmorrhage should be conducted upon strictly aseptic and antiseptic principles.

The author illustrated his paper by the report of a number of interesting cases which had occurred in his practice.—*Nashville Med. & Surg. Reporter.*

FOREIGN BODIES IN THE AIR PASSAGES.

Dr. Sprengel, of Dresden (*Centralblatt für Chirurgie*, April 4th), affirms that the question as to which of the bronchi is the seat of a foreign body impacted in the air passages can in many cases be readily and positively settled by the aid of auscultation. It is usually assumed that, if the air does not pass into one lung, the corresponding bronchus is completely closed by the foreign body, and that if the obstruction of the bronchus be incomplete, there will be a sibilant sound on inspiration at the seat of impaction, whilst the respiratory sounds on the opposite side will remain normal. Under certain circumstances, however, the determination of the precise situation of the foreign body may be attended with some difficulty. As a proof of this a case is recorded by Dr. Sprengel of a little girl who came under his care suffering from much dyspnœa in consequence of the presence of a foreign body in the air passage. There was a sibilant inspiratory sound over the right bronchus, while on the left side the respiratory sounds were almost inaudible. Tracheotomy was performed below the isthmus of the thyroid body, and the foreign body was seen occupying the whole lumen of the trachea, just above its bifurcation. The auscultatory signs in this case are to be explained, the author states,

by the nature of the foreign body, which was a large hollow bead, oval in form and open at each end. This, it is conjectured, was fixed at one end into the upper part of the right bronchus, and stretched across the lower end of the trachea, completely occluding by its distal portion the orifice of the bronchus on the left side. Thus the air was prevented from entering into the left lung, whilst it passed into the right lung through the tube formed by the large hollow bead, the narrowness of which, and perhaps an occasional occlusion by mucous, was the cause of the severe dyspnœa and of the sibilant sound during inspiration. This case, it is pointed out, shows that a hollow or tubular foreign body fixed at the lower part of the trachea may, by the signs which it produces, lead one to assume that it is fixed in one of the bronchi, since the air enters one lung and is excluded from the other. The absence of respiratory sounds on one side of the chest, or a sharp whistling sound heard over one bronchus, cannot be regarded as absolutely diagnostic of the presence of a foreign body in a bronchus unless we know that such body is a solid and not a tubular one.—*Brit. Med. Jour.*

GYNÆCOLOGY.

ON PERINEORRHAPHY BY DUKE'S OPERATION.

Dr. Thos. More Madden writes in the *Lancet:* The frequency of the occurrence of parturient lacerations of perineum, as well as the occasional gravity of their consequences, and the difficulties sometimes experienced in their reparation, may, I trust, be sufficient excuse for the following very brief communication on this subject. For many years I was in the habit of treating the injuries referred to by the older methods then in vogue. These procedures I have for some time, however, almost completely abandoned, having become familiar with the improved mode of treatment suggested for such cases by Mr. Duke, of Dublin, the advantages of which, I think, are such to ensure its general adoption in the treatment of the majority of instances of this kind. On first reading the author's account of his method of perineorrhaphy, it seemed to me as being probably a modification of Mr. Lawson Tait's ingenious operation for the same purpose; but on giving it a practical trial, however, I found that it was quite distinct. The differences in detail between the two operations which most impressed me were—(1) the absence of flaps, (2) the depth and shape of the incision, and (3) the introduction of the sutures from without in the operation recommended by Mr. Duke, whose procedure in the latter particular I have modified in my own practice by the adoption of a specially designed form of quill suture. The solidity of the union resulting from the healing of the deep incision is to my mind one of the great advantages of this operation, affording, as I have found, a means of reproducing the perineal body, which may be regarded as the keystone of the entire structure. The results of perineorrhaphy by Duke's method (with the technique of which I need not occupy space here, as it has been sufficiently described by the author) may be best exemplified by the results of the cases of perineal rupture, which within eighteen months were either sent up to me for operation or presented themselves at the out-patient department of the hospital, suffering from the usual consequences of this distressing accident. In only one of these cases did I fail to obtain primary union, and in that instance this was eventually secured by granulation; whilst in nine cases the operation resulted in complete restoration of the structural integrity of the injured parts. The average time occupied by the healing process was about ten days, and the patients then generally left the Hospital with a practically new perineal structure, the solidity of which was such that it would be difficult to imagine its disruption by any subsequent delivery however tedious or severe.—*Lancet.*

OBSTETRICS.

THE EXPRESSION OF THE PLACENTA,

By what is known as Credé's method, is sometimes followed by shock, supposed to be due to pressure upon an ovary or Fallopian tube. Three cases of this kind are reported in volume xiv of the "Transactions of the Edinburgh Obstetrical Society," and a correspondent of the *British Medical Journal* writes of another that occurred in his practice. In expressing the placenta, which seems to have been attended with difficulty, the operator felt something hard and round slip from between his thumb and the womb, the patient at the same time crying out in pain and becoming immediately unconscious. No great difficulty was experienced in bringing her to, but the accident is unpleasant and one that it should be easy to avoid. The patients to whom it has happened are all

spoken of as "nervous" subjects; but as it is well known that injury to the testicle produces shock altogether out of proportion to the apparent damage done, it is not surprising to find that pressure upon the ovary also causes great shock. Charpentier would no doubt find in this accident an argument in favor of his claim that traction upon the cord is preferable to abdominal pressure in the delivery of the placenta.—*N. W. Lancet.*

A SHORT REPORT OF THE USE OF ICHTHYOL IN DISEASES OF WOMEN.

Dr. Kotschau was led to use this drug in a case of painful pelvic peritonitis, with excellent results, after having observed that it acted well in relieving pain in cases of contusions or inflammations affecting joints, muscles, and bones. He then began to use it generally, and reports 127 cases, of which 28 were cases of endometritis cervicis; 16 were cases of endometritis corpus uteri; 52 perimetritis (pelveo-peritonitis, exudations, salpingitis, and oöphoritis); 4 pure metritis, the adnexa not being involved; 27 cases of parametritis.

The cases of cervical catarrh were treated by making applications of ichthyol to the portio vaginalis. In acute cases six to eight applications were made in all, each one at an interval of three to four days and in conjunction wlth warm injections and general massage. Of the 28 cases, 19 were cured, the other 9 showed no improvement.

Applied to the body of the uterus it has proven as effective as iodine or chloride of zinc, and never causes the colicky pains which these drugs produce at times.

In the 52 cases of perimetritis, with the exception of 6, a rapid cure was effected. A ten per cent. ichthyol-glycerin solution was applied on tampons, these applications being made twice a week by the writer and daily by the patients themselves, the patients also taking sitz baths daily. In the 6 cases no improvement took place.

Of the 27 cases of parametritis, 5 were not improved, except to slightly diminish the pains, 12 were completely cured, and the remaining 10 were markedly benefitted, though not entirely cured. In all of these cases ichthyol pills (0.1 t. d.) were given internally. The pills seemed to improve the patients' appetites and to hasten absorption of the exudation.

In the 4 cases of metritis no benefit was obtained by the use of the drug.

The author, therefore, recommends the use of ichthyol; for, even where it did not cure the disease, it frequently relieved the pains. —*Exchange.*

PÆDIATRICS.

HEADACHES OF CHILDHOOD.

Jules Simon (*Gaz. des hop.*, Nos. 36 and 37—*Revue des Malades de l'Enfance*, May, 1891) recognizes seven different groups of headaches:

1. The Headaches of Growth.—They are frontal, exaggerated by work, coincident with pains of the joints, periosteum and cardiac hypertrophy. Treatment, muscular rest, tonics, good food, phosphate of lime, beer and malt.

2. Headaches from Mental Strain.—The children are either very intelligent and excitable, working very hard; or, on the contrary, they are those of late mental development, who have difficulty in pursuing their studies. Treatment, in the first class of cases, cessation of mental work, physical exercise of all descriptions, without fatigue, and hydrotherapy. In the second class, a moderate amount of mental and physical exercise.

3. Headaches from Digestive Disturbances.—In children who eat too often, or too much, or too rapidly; appearing in from one to three hours after a meal. Treatment, strict regulation of diet; one of the bitter tonics before meals; warm drinks after meals; treat the constipation.

4. Nervous Headaches.—This form is easily recognized, it includes the headaches of those that are irritated by their surroundings, persons as well as circumstances, our future neurasthenics, epileptics or hysterics. Treatment: short douches, exercise, massage, valerian, aconite and antipyrin for the hysterical patients; belladonna and the bromides for the epileptics. Avoid colds.

5. Rheumatic or Gouty Headaches—Are sometimes accompanied by intense congestive phenomena simultating meningitis. They are recognized by their hereditary antecedents, by being associated with other pains; neuralgias, arthralgias, myalgias; the urine contains a great quantity of phosphates, oxalates and urates. Treatment, moderate feeding, exercise in the open air, Russian baths and rubbing; laxatives; alkalis; salicylate of soda in doses of from 0.25 to 0.30; tincture of colchicum, gtt. 10 to 15 daily.

6. Headaches of Anæmia and Intoxication.—In the first instance as the result

of lack of fresh air, bad hygiene; in the second, by malaria, carbon monoxide, excessive medication (iodine, opium, digitalis, belladonna). Treatment, remove the cause.

7. Headaches Produced by Lesions of the Nerves of Special Sense.—In the eyes, chronic conjunctivitis and keratitis, to be treated locally and with large doses of quinine; troubles of refraction like hypermetropia and astigmatism to be relieved by proper glasses. In the nose, polyps, hypertrophy of the turbinated bones to be treated locally. In the ear, adenoid vegetations, otitis, foreign bodies in the external auditory meatus.

HYGIENE.

ACCIDENTAL INOCULATIONS WITH TUBERCLE.

The presence of the tubercle bacillus affords a ready proof for the local development of a tubercular manifestation which has resulted from accidental inoculation. Jadassohn records two cases of lupus which had developed in this way. One patient was a butcher, upon whose finger tip an ulcer developed, and subsequently a typical lupus patch formed on the forearm, and another on the upper arm. The discovery of tubercle bacilli in the lesion proved it to be tubercular. In the second case, the lupus developed on the site of a tattoo, and coincided exactly with the lines of the tattooed design. The operator, it appeared, was phthisical, and had used his saliva in mixing the colors. —*Med. Press.*

THE NUTRITIVE VALUE OF RECTAL INJECTIONS OF EGG ALBUMEN.

The assertions of Voit and Bauer and Eichhorst to the effect that egg albumen is absorbed by the rectum only in the presence of a certain proportion of chloride of sodium, but is returned unaltered with the fæces if this reagent be absent, had led Huber to investigate this point anew, and to make his observations on man, and not on dogs, as his predecessors had done. The experiments were planned with great care, and the quantity of albumen removed from the body, both by the urine and the fæces, was estimated. As the outcome of several series of experiments, the results of which show a great agreement, the author gives as his conclusion that egg albumen simply beaten up is absorbed by the rectum, but only in very small quantities, and consequently a nutrient enema of this kind possesses hardly any value. When, however, a certain amount of common salt is added (15 grains to each egg in the present series of experiments,) the quantity of albumen absorbed is doubled. Peptonized egg albumen was absorbed in very slightly greater proportion than that treated with common salt, but of peptonized albumen with salt, between sixty and seventy per cent. was absorbed, and we, therefore, have in this mixture an extremely valuable material for nutrient enemata.

In no case of Huber's were the enemata expelled; nor was albuminuria ever found to occur after their use.

MEDICAL CHEMISTRY.

AN ALKALOID FRON TUBERCLE BACILLI.

By treating the contents of tubes containing agar-agar cultures of the tubercle bacillus with hot water acidulated with hydrochloric acid, filtering, evaporating, precipitating with platinum chloride, separating the double salt with hydrogen sulphide, filtering, and evaporating to dryness, Zuelzer (*Berliner klin. Wochenschrift*, 1891) was able to abtain a chloride of an alkaloid, 0.01 of which, injected into rabbits and guinea-pigs, caused, in from three to five minutes, increased frequency of respiration, elevation of temperature and protrusion of the eyeballs. The eyes were brilliant, the pupils slightly dilated and the conjunctiva injected. The protrusion was the more marked on the side on which the injection was made. The symptoms lasted for from fifteen to twenty minutes. Three rabbits died after injections of 0.02 or 0.03. The muscles into which the injections were made were reddened and the seat of hæmorrhages; there were also hæmorrhages in the mucous membrane of the stomach and of the upper portion of the duodenum. In two cases there was ascites. Similar results followed introduction of the substance into the conjunctival sac.—*Amer. Jour. Med. Science.*

NEWS AND MISCELLANY.

THE CROONIAN LECTURES.

Owing to the illness of Dr. Burdon Sanderson, who is now recovering from at attack of influenza, the Croonian Lectures have been postponed. Due notice will be given of the date fixed upon.

FEMALE PHARMACISTS IN FRANCE.

A bill is now before the French Legislature which provides for the admission of duly qualified females into pharmacy. This bill practically restores to women the rights they possessed five hundred years ago.

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Clinical Lecture.

TUBERCULAR ADENITIS—ONYCHIA.

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TUBERCULAR ADENITIS.

Gentlemen:—When we last met I brought before you a child with enlarged glands in the cervical region. At that time she was in poor condition to be operated upon, but having since had a tonic treatment, we find to-day that her temperature is lowered, her appearance is bright, and even the inflammatory condition of the glands has somewhat subsided, withal, we think we can now safely operate.

We will remove the tuberculous glands, pare the edges of the skin and approximate them so that the surface will scarcely bear a trace of the operation. Eventually the ulceration would heal up of itself, but would leave an ugly looking scar ; furthermore, instead of healing in a few days, it would run two or three months and drain the system to a much greater extent than we think wise to allow. Therefore, we will operate immediately.

The glands are tubercluous and have undergone fatty, or cheesy, degeneration. The ætiology and course of such affections having been made plain to the surgery of to-day, the indication to remove these glands is imperative. Here we have a tuberculous focus, in a part plentifully supplied with blood vessels. This blood traveling from the gland to other parts of the body, the lungs and brain, is bound more or less to infect the economy ; not necessarily to deposit the bacilli in these parts, and cause a tuberculosis or meningitis, but being laden with poisonous materials, it is not fitted to feed the other parts of the body, so that the sooner it is removed the better will it be for the child.

You will notice, towards the deeper portion of the gland, a grayish spot, which has undergone caseous degeneration. The surrounding structures have simply grown under the influence of the tubercle bacilli. They are still alive, but it may be that in a day or two they too will have died and undergone degeneration. Therefore, we will remove the whole mass.

We find that the sterno-cleido-mastoid muscle has formed adhesions with this mass ; has formed a sort of abscess wall, if you wish, from a chronic inflammation of its myolemma. Not daring any longer to use the knife, I now discard it, and, with the aid of my fingers, have exposed the internal jugular vein, pursuing the dissection further, I have come directly upon the carotid artery, the pulsations of which you can all see. Here the structures are so delicate that it is not wise to use even an ordinary curette.

Having removed all the infected glands, it is now our duty to get a surface wound that will not betray the fact that this child formerly had an ulcerative process here. The way to do this is simply to pare off the edges and approximate them carefully,, using two sets of sutures, a deep set to bear the strain caused by the tendency of the tissues to retract, and a superficial set to unite the surface and bring the edges into nice opposition.

Before closing the wound, we will inject into it a 10 per cent. solution of iodoform in ether. The ether evaporating, will leave a delicate covering of iodoform in every part of the wound.

As to a drainage tube it is not necessary in this case. The introduction of the drainage tube by Chassaignac was certainly one of the greatest steps in surgery since the time of the introduction of ligation of arteries, but you must remember *why* drainage was introduced. Its purpose was to remove foulness from the body, just as the filth is removed from our city by sewers. At that time, suppuration was looked upon

as necessary to the healing of a wound, and some means had to be provided for its removal, but to-day, knowing that we do not have suppuration if we are cleanly in our methods, it follows that we do not absolutely need the drainage tube. From the moment that we drain, we confess that we have fallen below our aim. Therefore, operating in an antiseptic way, we hope that whatever effusion takes place will be re-absorbed and will not accumulate, together with a mass of dead white blood corpuscles in the form of pus, thereby necessitating drainage.

Furthermore, in a wound like this, even if we were to use a thoroughly antiseptic drainage tube, acting as a foreign body it would of necessity irritate the parts promoting an effusion of serum, and it would be very hard for us to determine whether this effusion was natural or caused by irritation of the drainage tube. Of course if this wound were in a closed cavity, instead of in the neck, I would not run the risk of possible suppuration. Quite different would it be if we were operating in the peritoneal cavity. We would then have to put in a glass drainage tube, notwithstanding the irritation caused by it, as a small amount of pus might form and produce general peritonitis.

ONYCHIA.

The next case I wish to bring before you is one of onychia, an ingrowing toe nail. Onychia does not necessarily mean an ingrowing toe nail, but any inflammation of a nail. Apparently it is a slight affection to deal with. It is one which a physician will treat with mild methods for months, and the patient not get well. The idea of an operation for such a slight affection is revolting to the patient and even though the physician be firm in proposing an operation, if there is the slightest chance for the patient to get well in any other way, he will choose that way.

You know that a nail is simply a great amount of the same epithelium which is on the surface of the skin, all gathered into one spot, bound down by a cement substance which holds the cells together, bound together in a mass, so far away from the nourishing blood vessels that they become hardened, just as a corn becomes so hard that it begins to look like a nail. So also with the nail; it spreads from the mucous layer of malpighii about the matrix, exactly as the epithelium covering the rest of the skin spreads from that layer. But that particular layer in the matrix furnishes the epithelium born there with a chemical substance which is not found in epithelium elsewhere, a substance which gives these cells an adhesive property and binds them tightly one to the other, instead of letting them drop off one by one as they do from the skin in other parts of the body when they occupy such a remote seat from the blood vessels. That being the case, and the nail being hard, it may be considered a foreign body. If you take a piece of nail and insert it into a wound, it would act as an irritant, just as any foreign body would. So, imagine the irritation which takes place when you have a large nail, and a shoe which causes the edge of the nail to press into the skin. From the moment the skin has been destroyed by the pressure you have an ulceration and the nail pressing into wound is nothing more or less than a foreign body in the wound, and not until you remove the foreign body can you hope to cure the condition. The removal of the nail from the wound is the one object to be sought. There are several ways of reaching that end. There is a palliative way, which consists simply in depressing the skin around the nail and inserting a piece of cotton between the nail and the wound, thus removing the foreign body. In aggravated cases like this, however, not only is that measure painful, but the cotton gradually absorbs the secretions and itself becomes a foreign body, creating almost as much harm as the nail.

Again, here is a palliative treatment, which consists in putting on the toe some substance which will contract the tissues. Burnt alum is generally used for this purpose and its astringent action in contracting the blood vessels and tissues, removes the wound from the nail.

In some cases these palliative means may suffice, but in others operative treatment is necessary. There are several operations. One consists in removing the nail altogether, but this is not advisable, as it is only a small portion of the nail which does harm, and success may be gained without such disfigurement of the toe.

The best operation is that of Fehleisen, which is the removal of about one-third of the width of the nail in its whole length, including the matrix, together with the flesh beneath, removing it down to the bone. I have now done this, and place sutures, one above and one below, to draw together the edges of the wound I have made. The wound heals by first intention and in two

weeks you will not suspect that the patient had an ingrowing toe-nail.

MALIGNANT LYMPHOMA—CONSTIPATION—PERNICIOUS ANÆMIA—CHRONIC EXUDATIVE NEPHRITIS.

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MALIGNANT LYMPHOMA.

Gentlemen:—The first patient I present to you to-day, is a man 29 years of age, and a coachman by occupation. A year ago last January he noticed, for the first time, some pain at the inner aspect of the left arm and forearm, and extending to the tip of the little finger. This pain gradually began to manifest itself in all of the fingers of the left hand, together with loss of power of both the arm and forearm. In June 1890, that is about six months after the appearance of the first symptom, he noticed a swelling in the vicinity of the collar bone, and with this swelling came an exaggeration of the pain in the region of the shoulder joint. He came to this clinic at that time with a temperature of $100\frac{5}{10}$, and an examination of his blood and urine proved negative. He was put on the use of iodide of potassium, and has been taking as much of that drug as 90 grains three times a day, but with no appreciable benfit.

As you look at this man, you can readily notice an enlargement above the clavicle on the left side, and that this enlargement is made up of separate tumors as if they were lymphatic glands. These tumors can be also felt in the back of this man's neck. On making a physical examination of his chest I find on the right side an irregular loss of resonance immediately beneath the clavicle, and I get flatness on percussion. On the left side is a tumor projecting beneath the clavicle, as well as extending above it. I get flatness on percussion on this side, with some tenderness. The breathing on the right side can still be heard, but the breathing on the left side is altogether absent. Posteriorly, I get flatness over the upper part of both lungs, with absence of breathing over the left lung, though heard to some extent over the right.

From this view of the case, as it is presented to us, it is at once apparent that this man furnishes us an example of those tumors which originate in the lymphatic glands and which run a malignant course. These tumors continue throughout their entire course to have the same structure as that of the lymphatic glands themselves, though there may be some excess of cells, or some excess of connective tissue structure present, and although they may have this apparently, harmless structure, they still exhibit all the characteristic symptoms of malignant tumors. They not only increase in size, but the muscles, fascia, and the entire surrounding soft parts become infiltrated with the new growth, as do the true sarcomata and carcinomata. It is for this reason that these tumors are known by the name of malignant lymphomata, though they are sometimes called lympho-sarcoma and lympho-adenoma.

As a rule, these tumors behave very badly. The first symptom this man had was pain by reason of the pressure on the nerves going to the left arm. That pressure has continued till he has lost power completely in the arm, and this tumor will continue to grow until it will eventually press on the air passages and the blood vessels, in such a way as to destroy the life of the individual. He has so far escaped one of the most painful conditions of this growth and that is pressure on the descending vena-cava. When the growth in the thorax presses on the descending vena-cava, there is, as a result of this condition, a venous congestion of the head which is very distressing. This man suffers comparatively little pain yet, though he is running near to the end of his course.

These tumors are of such a malignant character that a good deal of attention has been directed towards their treatment. If they were within reach of the knife the indication would point to their removal, but inasmuch as they are intrathoracic, their removal is quite impracticable. A variety of medicinal agents have been adopted for the treatment of these growths, but they have all been generally speaking without any practical benefit. The only plan that has been of any use has been the employment of arsenic hypodermatically, and kept up to the point of tolerance. Keep the patient under its toxic influence for some days and allow him to come out of it, bringing him again under the influence of this drug. There have been cases of improvement reported by this plan of treatment, but so far

as this patient is concerned, I should not suppose any plan of treatment would afford him much relief.

CONSTIPATION.

Case 2. The next patient presents a well marked example of a rather numerous class of patients who have disturbances of sensation, without any organic lesion. This condition is more common in women than it is in men, though occasionally occurring in the latter.

The patient I now show you is a woman 45 years of age, who has suffered from an acute brochitis about a year and a half ago. And since that time has experienced a feeling of general malaise. She does not feel as strong as formerly and has lost some flesh and strength. She also complains of a feeling of pain referable to the right hypochondriac region and is troubled with constipation. She has no physical signs about the chest or abdomen, and is evidently suffering from no organic lesion.

You will find in practice, patients present themselves to you for treatment, who have disturbances of sensation, as this woman has, but with no organic or even functional disease. I have seen a great many cases of this character who date the beginning of their abnormal sensations from the attack of influenza, which has been epidemic here, and this particular affection seems to have brought out this disposition in patients in whom it has not been observed before. It does not follow that because these patients present no pathological lesion, they do not suffer. There is something the matter with them from their point of view, and it is always a question as to the particular way in which it is best to manage these patient while under your observation. It is always of great advantage in the treatment of these patients if you can find something wrong about them that you can regulate and correct. As you correct this condition, these patients gradually get better until finally the disturbance of sensation gradually passes away. In this woman the only thing that seems to be particularly wrong with her is her constipation, and with this constipation is a certain amount of flatulence. Her physician tells me that her bowels are easily moved by laxatives, so for that reason we will give her one of the least energetic of the laxative medicines and the one, at the same time, especially suited for her case. We will, therefore, recommend her to take every night on going to bed from eight to ten grains of asafœtida in capsules. This will help her to sleep, will act as a laxative, cure her disposition to flatulence, and, at the same time, exert a certain sedative eeffet on her general nervous system. In addition to this she should be warned against the use of tea or coffee, and should not be allowed to eat indigestible food, confining herself to the use of simple and nutritious elements of food. She should also be encouraged, despite her feeling of weakness and general malaise, to go out of doors and take moderate exercise daily in the open air. There is a still further advantage in the treatment of these cases in not paying more attention than you have to the particular disturbance of sensation of the patient. By managing this class of cases in this way you will find they will do very well indeed and you may in time rid them altogether of these disturbances of sensation which distressed them so much.

PERNICIOUS ANÆMIA.

The next patient I show you presents all the pathological symptoms typically characteristic of the form of disease from which she is suffering. She is a woman 46 years of age, and complains of irregular menstruation, headache, œdema of the feet and shortness of breath. Her temperature to-day is 100° F. and a week ago was 99$\frac{8}{10}$° F. She has a systolic murmur at the apex, and her urine has a specific gravity of 1,010, but contains no albumen. An examination of her blood shows diminution in red blood cells and hemoglobin.

This trouble began in this case about a year ago, as she states, but it is very likely it has lasted for a longer period and reached its development at this time. If you look at this woman you can readily notice that expression of languor and feebleness, as well as an extreme palor of the skin and mucous membrane. She is already far advanced in the disease, though there is no reason why she should not improve for a time. You can have no difficulty at arriving at a diagnosis of pernicious anæmia in this woman's case.

The treatment of this woman resolves itself into the use of proper food and medicine. Her diet should consist largely of milk, and she would do better in bed than going about. The medicines best suited for her case would be the use of iron and arsenic. Iron alone is not of as much service to this class of patients as it is in simple anæmia; nor does arsenic alone answer very well. The combination of iron and arsenic is the most efficient treatment, and of these they have to take considerable quantities. The best way to give iron is in the form of Blaud's pills, and

the best form of arsenic is the arsenious acid. I should commence treatment in this case with $\frac{1}{60}$ of a grain of arsenious acid and two Blaud's pills three times a day after meals. Then I would gradually run these up till she was able to take $\frac{1}{30}$ of a grain of arsenious acid and twelve Blaud's pills three times a day. As regards the iron there is no trouble experienced on the part of the patient in running it up, but in the use of the arsenic, of course, she will have to be watched, for the first evidence of arsenical poisoning, œdema of the eye-lids, pains in the stomach, vomiting, etc., and the moment you find you are giving too much arsenic, then diminish the dose to the point of tolerance. By these means it is possible for this woman to improve considerably for a time. The more you see of these cases of pernicious anæmia, the more you will recognize the fact that they are bad cases to treat. Some of them do not improve under treatment, while others that look bad when they apply for treatment, improve a good deal and they begin to think they are well. They lose their bad color, and their shortness of breath, their appetite again comes back and they are able to work and attend to their daily avocations as usual, but they have to take some iron for a very large part of the time to keep them from running down and relapsing into their former condition.

CHRONIC EXUDATIVE NEPHRITIS.

The next patient presents certain clinical characteristics somewhat similar to the woman you have just seen. She had, as you saw, an extreme palor of the countenance, and that palor, I told you, was characteristic of essential anæmia. This man's face is almost as pale, his lips, you will notice, are exceedingly anæmic, and yet although the palor in both cases is almost the same, you would expect to find in the case of this man some organic lesion to account for his trouble. This man's urine contains large quantities of albumen, his pulse is rapid and full, but without increased tension, the pulsation at the large arteries of the neck is considerably exaggerated, and his heart is increased in size, the apex being further to the left than it should be. He has also a double aortic murmur and his abdomen is somewhat distended.

We have then a man 37 years of age who tells us he was in ordinary health up to a period of about ten months ago. He took at that time, he states, medicine for the expulsion of a tapeworm, and has been sick ever since. Neither the medicine, nor the tapeworm, has had anything to do with his present condition. During these ten months he has been suffering from dyspnœa which keeps him from lying down comfortably at night, and he has to sleep propped up with pillows. He has not had much of a headache till lately, but he has a neuro-retinitis and some swelling of the feet and ankle joints. He does not notice any change in the quantity of urine passed, although he says that it is sometimes higher in color than at other times.

When you look at this man you notice the anæmia to which I have already referred, and though this anæmia shows itself very plainly in his face and mucous membrane, we would not find the same diminution in the hemiglobin and the number of red blood globules as in the case of the patient with essential anæmia. This patient, then, illustrates a straightforward case of one suffering from chronic endarteritis affecting the aortic valve and a nephritis, of an exudative type, which you can call either chronic or subacute, but which, judging from the specific gravity of the urine, has already affected the structure of the kidney to a very considerable extent. These are the two important lesions from which this man is suffering and he presents an exceedingly unfavorable example of a patient of this class. He is a man, judging from his present condition, whom you might expect to get worse and very rapidly too, and the way in which he seems likely to get worse rapidly is in the further development of dropsy, in the continuance of the anæmia, and the progressive loss of flesh and strength.

Now as to the best way of managing this patient. This man is a great deal too sick to be up and about. He ought, therefore, to be in bed or in a reclining chair at home. The trouble about keeping these men in bed is that they cannot lie down with comfort. His food for the present should be confined exclusively to the use of milk, and bye and bye we might add some solid food to this. Then when you try to get any further than this treatment with this class of patients, viz: rest and milk diet, you will find it difficult to get hold of anything that will benefit them to any great extent. His anæmic condition we may try to help by iron and inhalations of oxygen, and we may be able to get rid of the dropsy by the use of purgatives, by sweating and by diuretics. On the other hand, you may find none of these things will be of any use, and that the dropsy instead of improving, will get worse.

Then as regards the character of his cir-

culation. There is nothing there calling for interference, for though the heart is diseased, it is doing its work fairly well. The inflammation that is going on in the kidneys is an inflammation of some activity and one that we feel we ought to do something for, but yet it is a condition very difficult indeed to control. In such a case as this it is possible that sweating the patient may help the nephritis. Hot air baths may be of some service in this direction, though counter-iritation, hot applications, or cups over the lumbar region are not apparently of any use in in this class of cases.

As to the use of drugs in this condition we are very much in doubt. In some of these patients opium seems to be followed by improvement, while others with the same pathological condition are dangerously poisoned by small doses of this drug. I recently saw an old lady with nephritis in whom a single dose of an eighth of a grain of morphia came near destroying her life. Then of the other drugs which we use for this condition most frequently are the iodide of potassium and the bichloride of mercury. Sometimes, we use them separately, and sometimes in combination. As a rule we get better results from the use of these drugs in combination than otherwise. It is not necessary to use them in very large doses. One-thirty-second of a grain of the bichloride and from five to ten grains of the iodide of potassium three or four times a day will be sufficient.

When speaking thus discouragingly of this class of patients, I have in my mind those cases that when you first see them are just as bad physically as this man is. When you come across a case like this, with so bad clinical features as this man presents and with such a short history of getting steadily worse, you know very well that whatever you do in the way of treatment will not prove very satisfactory to you or your patient.

COMMUNICATIONS.

CONDITIONS FOLLOWING PARTURITION REQUIRING ABDOMINAL SECTION.[1]

BY E. E. MONTGOMERY.

PHILADELPHIA.

The developments of abdominal surgery, in the last twenty-five years have, in many directions, revolutionized the practice of both medicine and surgery. The field of surgery under its influence has been widely extended. Operative procedures that would have been thought homocidal, for diseased conditions, that were then believed to be beyond relief, are now daily practiced and recognized as correct and scientific methods of treatment. While medicine and surgery have been so ready to accept the aid afforded by the abdominal surgeon, but little, until very recently, has been done in the field of obstetrics. It is true that the earliest abdominal operation was probably for the relief of the woman who could not otherwise deliver herself, but beyond this, there had been but slight interference with the knife with ordinary processes. The similarity of inflammatory processes following parturition to those of ordinary surgical infectious diseases had been early recognized, but it has been only recently that the methods of procedure which would be considered as proper in surgery, have been instituted in obstetrics. Women have been permitted to die from puerperal peritonitis or puerperal metritis, with large collections of pus in the pelvis, abdomen, or walls of the uterus without the obstetrician apparently being able to appreciate the surgical maxim "Ubi pus, ibi evacua."

As a resident physician in the Phila. Hospital I remember a number of cases in which these septic cases following parturition were permitted to die and subsequent autopsy disclosed large pus collections,—collections which could have been readily washed out and the cavities drained without increasing the danger to the patients,—indeed the danger would have been very greatly lessened.

In late years the importance of decreasing the opportunity for the entrance and multiplication of septic germs has been very generally recognized. With this in view we find the freguent use of vaginal and intra-uterine antiseptic injections. While it is recognized that these injections are not desirable in non-septic cases, there are but few obstetricians of the present day who do not practice them where there is indication of sepsis. The necessarily infrequent use of injections, even in those cases receiving the best of care, the inability to bring the antiseptic material sufficiently in contact with the entire mucous surface to destroy the multiplying germs and render the surface sterile, have led to the institution of plans of procedure by which the decomposing material, affording origin and nutrition to

[1] Read before the Pennsylvania State Medical Society, June 4th, 1891.

these organisms, should be itself removed. To this end late writers upon obstetrics, almost without exception, highly recommend the use of the curette in every case of evident sepsis. By it the decomposing material is thoroughly removed, the cavity subsequently irrigated, and rendered practically sterile. This procedure has been effective in greatly reducing the mortality of such cases, but there are many cases in which the diseased conditions have extended beyond the uterine mucosa, before the obstetrician has had an opportunity to institute measures to limit its action. In such cases the disease may be in the form of peritonitis, metritis, salpingitis, or ovaritis.

In a case of septic trouble following parturition, when the uterine cavity has been curetted, and subsequently irrigated with reduction of the temperature or amelioration of the other unpleasant symptoms, or in cases where physical examination determines the presence of inflammatory exudation about the uterus, in the broad ligaments, or the uterine surfaces, shall we sit tamely by and devote ourselves simply to the administration of remedies which at best can have but a remote influence, and permit the life of a patient to be sacrificed? Such cases are just as amenable to treatment by proper surgical procedure as are those in which inflammatory pelvic trouble arises from other causes and at other periods. That this has been recognized, is evident from the increasing number of cases found in the literature of the day, where women have been subjected to abdominal operations following parturition,—cases attended with the most gratifying results.

It is my purpose to consider to-day, some of the conditions that may render abdominal operation not only justifiable but absolutely necessary, in order to save the life of the patient; and would promise by saying in any cases in which there is a development of septic symptoms following parturition, the obstetrician should be on the alert to discover the avenue through which the poison has entered the system and prepare to have measures instituted to bring about its arrest.

Small Ovarian Tumors.—The presence of small ovarian tumors, frequently of a dermoid character, occur sufficiently often in women who have given birth to children, to lead to the consideration of their possible presence and injury in the process of parturition, and are worthy of our attention. A number of cases have been reported of death from septic conditions following parturition where subsequent autopsy has disclosed that small growths of this character have been situated in the pelvis, have undergone rupture or bruising by the head of the child, and have consequently led to the subsequent fatal symptoms with the advent of the septic condition. Were such patients subjected to abdominal section, the diseased mass removed, the abdominal cavity irrigated and possibly drained, an entirely different termination would have been the result.

Tubal Disease.—The presence of pus collections in one or the other tube does not necessarily interfere with conception and subsequent pregnancy. The presence of such a collection, however, is a source of the greatest danger to the patient during the following parturition.

H. J. Boldt, in Proceedings of the Obstetrical Society, 1888, page 59, reports the case of a woman twenty-two years of age, who had been married five years, she had had three children, the last child born four weeks before she came under his observation. The labor was long, followed two hours subsequently by high temperature and profuse sweating, temperature varied from 102 to 105, with constant pain over the lower portion of the abdomen. The uterus was large and flabby; on either side a large, fluctuating, movable mass, which was supposed to be a distended fallopian tube. The case was diagnosed to be one of septic salpingitis and was strengthened by the facies of the patient. She died in collapse a few hours subsequent to abdominal section. In the operation there was great difficulty on account of adhesions. On the right side the tumor preved to be a distended fallopian tube, which ruptured during the separation of the adhesions, discharging its contents into the abdomen. On the left side the tumor was an encapsulated intra-peritoneal abscess, which also burst during the operation. The Fallopian tube was not abnormal, ovary very intimately connected by adhesions to the uterus, so that its removal would have been impossible without injury to the uterus itself. At the autopsy, an abscess was found in the substance of the muscular structure of the uterine wall, which contained about two drachms of pus. The cavity of the uterus measured about three and a half inches.

Large Fibroids.—The presence of large fibroid tumors in the walls of the uterus of a paturient woman is always a source of danger. In such cases the uterine sinuses about the tumors are quite large; the presence of the growth interferes with the proper contraction of the uterine muscular fibre, so that

the avenues for the entrance of septic material are rather increased. In my experience in the Philadelphia Hospital, I saw two cases of this character, in which the presence of a tumor was the cause of the development of septic trouble, leading to the termination of the lives of the patients. The development of sepsis in such cases should direct the mind of the obstetrician to the importance of at once removing the cause of the development of the trouble ; delay is attended with danger.

Retention of Placenta.—The incomplete removal from the uterus of the placenta, membranes, or clots, is a prolific source for the development of sepsis during the subsequent convalescence. It is needless to urge upon members of this society the importance of thoroughly emptying the uterus of fætal vestiges or envelopes, and the securing of firm contractions of the organ, with its cavity free from clots, but it is an unfortunate fact that neglect of these precautions frequently results in the development of sepsis. In any such case the first indication would be, of course, the thorough clearing out of the cavity of the uterus by means of the curette or finger —which is, perhaps, the best curette—and the subsequent irrigation of the uterine canal with a disinfectant solution. This method of treatment will, in many cases, be sufficient to bring the disease to a happy termination, but in cases where the presence of foreign material has not been recognized sufficiently early, we may find that the infection is no longer confined to the cavity of the uterus but has travelled into the tubes or through lymphatics or uterine sinuses, has involved the uterine walls and peri-uterine tissues. When a patient suffering from sepsis following parturition comes under observation, we should carefully examine to determine, if possible the existence of inflammatory trouble about the uterus, and where it is found, should not only resort to thorough emptying of the cavity of the uterus, but also to the removal of the inflammatory collection. The importance of this will be well illustrated by the history of the following patient: A woman about thirty-five years of age, who had had two or three children, and had gained quite a reputation by the successful performance of abortion upon herself, was seen in consultation with my friend Dr. Nock, March 6, of the present year. The woman had accomplished the discharge of the fœtus in a two and one-half months pregnancy, by the use of the handle of a tooth-brush, a week before. This was followed by chills, elevation of temperature, pain and tenderness over the abomen, and an offensive discharge. I was called with a view to advise as to the wisdom of dilating the uterus and removing the evidently decomposing placenta. Upon examination of the patient a mass of exudation and a sensation of fluctuation was felt posterior to the uterus, pushing the uterus well forward. I urged the importance of not only dilating the uterus and removing its contents, but of opening the abdomen and securing the thorough evacuation of the pus contents of the pelvis. The afternoon of the same day the patient was placed under the influence of an anæsthetic, the vagina thoroughly irrigated, the uterus dilated, and the offensive decomposing mass removed, the uterine cavity thoroughly irrigated with an acid sublimate solution, 1 to 2,000, and the abdomen then opened and a pint of pus evacuated from the pelvis. Both ovaries and tubes were removed, the abdomen thoroughly irrigated aud a drainage tube inserted. This patient recovered without an unpleasant symptom. Had either procedure been neglected, it would have resulted in the death of the patient.

In cases in which there is no apparent infiltration or extension of the disease to the surrounding structures, we may be content temporarily, with the curetting and disinfection of the cavity of the uterus, but should this treatment not be followed by subsidence of the symptoms of sepsis, thorough examination should be made, and even when failing to find evidence of intra-abdominal trouble, an exploratory incision should be made to make certain the presence or absence of such extension.

The writer has recently had an apportunity of saving a patient by this procedure, who would otherwise have died from septic accumulation which was not apparent by superficial examination.

The case of a young woman seen in consultation with my friend Dr. H. G. McCormick, of Williamsport, Pa. She had been confined Feb. 6th, in a very easy labor. On the 8th the temperature arose to 103, this subsequently subsided, but remained above normal, and on the 13th, it reached 106⅘, when I was called to see her. I examined the patient carefully, palpating the abdomen but found nothing within the peritoneal cavity to indicate a cause for the serious symptoms. The patient was placed under an anæsthetic and the finger introduced into the cavity of the uterus and this organ thoroughly dilated, when there arose at once an extremely disagreeable odor, this was found to be due to acute endometritis with decomposing decidua.

The cavity of the uterus was thoroughly curetted with the finger and with the instrument, subsequently irrigated and an iodoform gauze drain introduced up to the fundus. The drain was removed at the end of forty-eight hours. The temperature subsided in a few days to normal, at which it remained for some fifty-four hours, when it again began gradually to rise, remaining for some days at 100 to 101, once going up to 103. On the 8th of March, twenty-three days after the curretting her temperature again reached $106\frac{2}{5}$, and I was summoned to see her. I again palpated carefully the abdomen to determine whether there was any extension of inflammatory trouble from the uterus. I found no involvement of the tubes of broad ligaments, uterus freely movable, no fixation of either uterus, tubes or ovaries. I again dilated the cavity of the uterus with the finger and explored the entire cavity or internal surface of the uterus, to determine, if possible any collection of pus within its walls. There was an indication on the right side of there having been loss of tissue of the uterine cavity by the probable formation of an abscess, this was still further confirmed by the history of pus having been discharged from the uterus within the previous three weeks. A hard rubber drainage tube was inserted into the cavity of the uterus with the hope that it would promote drainage still further, and that the elevation of temperature would subside. The temperature was reduced under the influence of large doses of acetanlide, but there would be chilly stages occurring about every five or six hours, followed by an exaggerated temperature. On the morning of the 10th, I again returned in answer to a summons, determined to open the abdomen, with a view of ascertaining whether there was any obscure cause for the septic symptoms. The abdomen was opened, in this I was assisted by Drs. H. G. McCormick, Nutt, and Conley, of Williamsport, Pa., and Dr. T. B. Early of Philadelphia. The right ovary and tube were raised up, without finding any disease in the tube, the ovary was probably twice its normal size, apparently cystic. The left ovary and tube were then raised up, the tube showing in its abdominal end a small piece of lymph, the ovary upon its anterior surface showed also a piece of adherant lymph, the ovary was four times its normal size and was also apparently cystic. The condition did not offer what I thought sufficient cause for the serious condition of the patient. I then carefully went around the entire surface of the uterus to determine the presence of any pus collections within its walls, examined carefully the broad ligament but with a negative result. At a loss for something better to do, I ligated the pedicles, removed the ovaries and tubes, washed out the abdomen, closed the wound and replaced the patient in bed. The operation had been begun with the patient in a chill, and with a temperature of $104\frac{3}{5}$. The ovaries were examined, the right presenting nothing more than a serious collection without any well established cysts. Opening the left ovary, a teaspoonful of thick greenish, offensive pus was disclosed, and this we concluded to have been the cause of the profound symptoms, from which the patient had lately suffered. Her subsequent convalescence was normal, temperature subsiding and reaching normal within two days. She is now in excellent health, and is nursing her child. The milk supply having been lost for a time during the most profound symptoms.

Another case illustrating the importance and absolute necessity of abdominal section, was one seen in consultation with Dr. Hollopeter. The patient was a woman, 26 years of age, who had been confined the latter part of the last year, and owing to the fact that she was living in an adjoining room to her husband who was dying with phthisis, her physician was particularly careful in the exercise of antiseptic precautions, both during parturition and its subsequent convalescence. She did well until the end of the second week, when there was an elevation of temperature which continued at 102 to 105. She had profuse night sweats, became very greatly emaciated, suffered from continuous pain in the pelvis, a frequent desire to void her urine, and a steady decline in strength. Upon examination a mass of exudation was found apparently in front of the uterus, pressing upon the bladder, which gave the sensation of the presence of fluid. The operation was done, both ovaries were found to form abscess cavities the size of small oranges. The omentum was glued down to the tissues in front of the uterus, and it was with considerable difficulty that it could be separated, as it was folded up into a large inflammatory mass. It was ligated and this portion removed. The evening following the operation the patient had a temperature of 103, this lasted, however, but two hours, after which it subsided and did not subsequently reach 101. The patient rapidly increased in strength and appetite, with a discontinuance of sweating, and, at present, is in the enjoyment of excellent health.

To these cases I might add a number of

others illustrating the importance of abdominal section for diseased tubes and ovaries, which have given rise to profound septic symptoms following parturition. There are other cases in which the ovaries and tubes appear apparently healthy, but in which there has been an absorption of septic material from the uterine mucosa, giving rise to abscesses in the walls of the uterus.

During my term of service as a resident physician in the Philadelphia Hospital, I remember having seen a woman who had had an attack of puerperal metritis, from which she was apparently convalescing, her temperature, however, varied from 99 to 101, and her pulse continued rapid. She had been about, able to sit up part of the day, when she was suddenly taken with symptoms of collapse and died at the end of twenty-four hours. At the autopsy it was found that the fundus of the uterus had been the seat of an abscess or of multiple abscesses, from which it had entirely sloughed off, leaving the fundus open, giving the remainder of the uterus the appearance of a funnel.

In cases of abscesses in the uterine walls a late writer has advocated supra-vaginal hysterectomy; as the cervix forming the stump in such cases would be exceedingly short and difficult to bring up into angle of the wound, it has seemed to me that it would be a more preferable procedure to extirpate the uterus. This may be done through the vagina, or by Kraske's method, behind the anus, by enucleating the coccyx and resecting the sacrum, or by the abdominal method. Of the three different procedures, the vaginal or the Kraske method would be preferable.

In what I have said in advocacy of abdominal operations following parturition, I would not have it understood that I urge such procedures in every case of sepsis, on the contrary, I would urge first, that the patient should be subjected to a careful and thorough examination to determine the avenues by which the poison is entering the system, and ascertain measures to arrest its further progress.

Thus, in September of the past year, I saw in consultation with three other physicians, a case in which the question of abdominal incision had been considered and I was asked to decide as to its wisdom or necessity. The patient was very sensitive, had undergone an exceedingly difficult labor, and was at the time, suffering with a temperature of 103. I suggested that as it would be necessary to place the patient under the influence of an anesthetic to determine accurately the condition of the abdominal cavity, it would be better to make preparation for an abdominal operation should the examination disclose its necessity. The patient was etherized, when the examination disclosed that laceration had taken place through the peritoneum into the rectal septum, and a profuse offensive lochia was being discharged. Introducing the finger into the vagina it was found that the vaginal walls were lacerated laterally to the tuberosities of the ischia, and upon the left side the laceration had extended into the broad ligament, so that the finger could be projected against the peritoneum. With such an extensive laceration of the tissues, affording a large surface for the absorbtion of septic material, I at once concluded—in which conclusion my colleagues concurred—that there was here sufficient cause for the phenomena present, and the symptoms of abdominal complications were negative, consequently no incision was required. The sutures were removed from the perineum, the cavity of the vagina and uterus thoroughly washed out and the wound treated as an open one, by frequent irrigation. The temperature subsided, but two days following ran up to 106. She was at once placed upon a blanket and wrapped in a sheet wrung out of ice water, bathed in ice water, and acetanalide gr. x, given every hour until she had had three doses. Her temperature that evening was 100, the following day 99, and never rose above 100 during her subsequent convalescence.

In cases of sepsis, then, we would advise the following method of treatment.

1. Careful examination as to the avenues of entrance of septic material, and prompt measures to secure its elimination.

2. Where there is no vaginal or vulvar laceration to afford an entrance, the dilatations of the uterus and the thorough curetting of its cavity, followed by intra-uterine irrigation.

3. Where the presence of septic absorption has led to evident accumulation within the pelvis, or to the presence of fluctuating masses therein; prompt opening of the abdominal cavity, with the removal of the diseased organs, irrigation of the cavity and drainage.

4. Where no cause for septic disease is found in the pelvis, where curetting and irrigation of the uterus has had no influence upon the progress of the disease, an exploratory incision should be made to determine whether there are not small pus collections within the internal organs, serving as centers for the distribution of the poison. If the ovaries are somewhat enlarged without

giving rise to other symptoms to indicate the presence of pus within them, it should be determined if necessary, by puncture. In the healthy organ, puncture with an aseptic knife or needle will not injure it. If it contains pus as in our patient, such a plan would lead to its disclosure.

5. Where the uterine walls are the seat of abscesses, the uterus itself should be removed.

6. Where fibroid tumors within the walls of the uterus are associated with septic symptoms, operation should be done promptly and these growths with the fundus of the uterus removed.

7. If there has been any reason to suspect the presence of small dermoid or other ovarian cysts, and their injury during parturition, abdominal operation is urgently indicated, and where they have not been suspected and are the cause of the septic symptoms the course of procedure directed in this paper, would lead to their disclosure and removal.

CANCER OF THE PANCREAS.

BY J. L. MASTERS, M. D.,
PADDY'S RUN, OHIO.

I desire to report two cases of primary cancer of the pancreas, which it has been my privilege to see.

I was first called to see T. W. aged 43, May 7, 1888. He was tall, sparely built, and a farmer by occupation. He went on an occasional drinking spree. Nothing of interest in the family history.

He had had pneumonia, pleurisy and intermittent fever a number of years before. He had been kicked in the abdomen by a horse, but the injury had never given him any trouble.

When I first saw him he had what I thought to be remittent fever. He had elevated temperature and a rapid pulse following a chill, an acute headache, bilious vomiting, constipation, coated tongue and general malaise. The symptoms continued eight days under the influence of a calomel purge followed by quinine.

In ten days the symptoms returned followed by same treatment with cessation of symptoms in six days.

At the time of the second attack he told me he had been losing flesh rapidly, became easily tired, had palpitation of the heart, grew short of breath and had a great deal of pain in the top of his head.

I examined him very carefully at this time in a vain search for something upon which to base a diagnosis.

He remained under my care until Oct. 27, when he sought other advice. He passed into the hands of two different physicians before I again treated him, one doctor stating that he had consumption and the other attributing his trouble to the liver.

Feb. 2, 1889, I saw him again at which time he was complaining of pain over the spleen. His respirations were rapid, pulse, 110, temperature 101°. The abdomen was tympanitic and greatly distended. Bowels constipated; some frontal headache. The spleen was much enlarged, extending down to within two inches of the symphysis pubis and one inch to the right of the umbilicus. It was very firm and not tender. This enlargement had all taken place in four months, between Oct. 27th and Feb. 2nd, of the following year.

Another careful examination failed to discover any lesion except the enlarged spleen.

The skin was sallow or earthy. Jaundice was never present. The fever was intermittent at first but became remittent; the intermissions occurring in the morning. Sometime between Oct. and Feb. he commenced coughing, the cough being of an irritable kind with little or no expectoration.

Examination of the lungs negative. At times the skin was bathed in sweat.

The appetite continued good most of the time until the last two months, when he complained of getting tired of everything so soon. There was no dislike for any special article of food; but he vomited every time after taking cod liver oil which I tried to give him.

Nausea and vomiting were early symptoms, coming on usually with a coughing spell. He vomited only four times within the last six months.

One of the very disagreeable symptoms of which he complained was an intensely salty taste always present in the mouth.

Pyrosis, acid eructations and burning in the stomach were annoying symptoms. Bowels constipated and stools dark colored throughout the illness.

The urine was abundant, high colored and deposited a milky sediment. Examination never showed the presence of anything but the phosphates, but I have since wondered if there was not some fat present. The countenance was always anxious and pinched.

When in the upright position he had more pain and leaned forward to relax the abdominal muscles. The last few months

the tongue was clean. The pulse was weak and thready from 100 to 120. Temperature 100° to 103½°.

Pain was never a distressing symptom, often being entirely absent for days. When present it was always referred to the region of the spleen or liver. It was never lancinating but often dull and heavy. A tumor was never made out on account of the extreme abdominal distension and enlarged spleen.

Emaciation was progressive and he died April 15, 1890, a little more than eleven months after I first saw him. Death was due to exhaustion, the immediate cause being œdema of the lungs and hydrothorax, commencing about four days before death.

Diagnosis leucothythæmia. Treatment was symptomatic and supportive.

Autopsy 24 hours after death, Drs. Hoover, Hancock, Scott and Butterfield being present.

Rigor mortis well marked. Body greatly emaciated. Abdomen greatly distended. Heart very small and pale. Blood vessels stood out prominently on the surface (of heart). Pericardium full of fluid. Left lung completely adherent to chest wall and œdematous.

Right lung œdematous, partly adherent, non-adherent space filled with fluid. On the anterior surface of the middle lobe of the right lung was a small nodule, firm, reddish-brown, and the size of a cherry. In the abdominal cavity was about two pints of fluid. Intestines distended with gas, otherwise normal. The spleen was very much enlarged being about 10 in. by 8 in. by 5 in. It was very hard and a reddish blue in color.

The liver was slightly enlarged. A mass the shape of an egg was found on the anterior surface of the right lobe the size of a hulled walnut. The mucous coat of the stomach was injected. The duodenum and kidneys were normal.

The head of the pancreas was a nodular tumor with a rounded outline, composed of nodules varying in size from a pea to a small hickory nut. The tumor was about 2½ by 3 inches in diameter. The remainder of the pancreas was normal.

The lumbar glands were much enlarged, and some were nodular. They varied in size from ½ to 1½ inches in diameter. Microscopical examination was not obtained, because the specimen was permitted to spoil by the pathologist before an examination was made.

The opinion of all present was that the disease was primary cancer of the pancreas.

Case 2, occurred in Dr. Hoover's practice, of Ross, O., and to him I am indebted for notes on the case and the privilege of visiting the case and of attending and holding the autopsy.

Case 2. Mr. C. W. æt. 65, widower, occupation farmer. Among his children is an imbecile daughter and a son with tuberculous hip joint disease. His wife's death preceded his two or three years, she having died of cancer of the breast. Had never had any severe illness, nor had he ever received an injury.

The onset of his troubles was some digestive trouble in Jan. or Feb. 1890 with general malaise and loss of flesh. The loss of flesh was rapid and continuous, the whole amount lost being about 50 pounds.

There was more or less dull pain in the epigastrium, radiating to the thorax, the loin or the umbilical region. It was never severe enough to call for an anodyne except once or twice. The pain was not increased by motion or erect posture. He was free from pain the last month.

The qantity of urine was about normal, brownish yellow, staining the chamber an orange color. The sp. gr. 1028. It showed the presence of bile under the tinct. iodine test. It was not examined for fat.

The bowels were obstinately constipated. The stools were at first hard but later were soft. They were of an ashy color.

The skin was dry and very much jaundiced, being of a deep yellow. It (the jaundice) appeared five or six weeks before death and persisted.

The expression was not unnatural, the temperature about normal; pulse good and 76 to 90. He had pyrosis, acid eructations and burning in the stomach after meals.

The appetite was fair but capricious, there also being many things he could not eat.

He had occasional nausæ but never vomited. He had hiccough a few times.

Physical examination revealed a tumor in the epigastric region, firm and not painful to gentle pressure. On percussion it gave a dull note; on auscultation there was a distinct bruit. On palpation, pulsation was plainly felt, suggesting the possibility of the growth being an aneurism.

Through the kindness of Dr. H., I was permitted to see Mr. W. about Oct. 1, and was asked for a diagnosis. At a future date I gave it as my opinion that he had cancer of the pancreas. He died Oct. 27, after an illness of about 10 months.

An autopsy held 20 hours after death. The body was much emaciated, skin a deep yellow. A tumor plainly visible in the

epigastric region. Upon examining the abdominal contents it was found that the head of the pancreas was a somewhat flattened oval tumor 2½ in. diameter by 1½ in. thick of a yellowish red color. It was very firm and resisting. In the liver were numerous fatty patches. The borders of the liver were rounded but the size was about normal. The common duct was obstructed by compression, but I could easily pass a probe through it when the pressure was removed.

The duodenum was congested. There were neither adhesions nor peritonitis. The stomach was apparently healthy. Sections were examined microscopically and the pathologist pronounced the disease schirrus of the pancreas.

After looking over the clinical history of these two cases one could scarcely conclude they were the same disease had not an autopsy been held in each case and the pathological condition found to be the same. It is true the first case lacks the positive evidence of a microscopical examination, but microscopical examination placed it with the second case.

In the first place the spleen was enormously enlarged. This was due I think to the pressure from the tumor in the head of the pancreas upon the splenic vein, producing a long continued hyperæmia and consequent growth in the spleen. In case two the spleen was of natural size.

The first case was attended by fever. In case two there was none. The fever must have been due to either the local peritonitis about the tumor or was of a septic nature. Some of the nodules were breaking down in the center, and it is possible that the absorbents took up a certain amount of septic matter and produced septic fever.

In one case there was a cough, in the other none. The cough may have been produced by pressure on the cœliac plexus, initiating the pneumogastric and producing a reflex cough.

I cannot explain the abdominal distention unless it was due to fermentation from the want of the action of the pancreatic fluid upon the ailment.

These cases both occurred in males over forty years of age. They were both very difficult to diagnose, for among other reasons it was not thought the pancreas was apt to be the source of trouble. I am led to believe that pancreatic troubles are more common than we suspect. Within the last three years these two cases have come under my notice.

Out of 11,492 autopsies from all causes .011 were cancer of the pancreas. Of 622 internal cancers, more than .20 were of the pancreas. Of 460 cases of cancer in all parts of the body 6.3 per cent. were of the pancreas. Since cancer of the pancreas is of such frequent occurrence and presents such varied symptoms it behooves us to be on the lookout for it.

Among the symptoms usally found in cancer of the pancreas are to me digestive disturbance, pain of a neuralgic character in the epigastrium, jaundice appearing late in the disease but persistent; fat in the stools and urine, early and continued loss of flesh and strength, and the presence of a tumor in about one half the cases. It occurs much more frequently in males than females and usually after the age of forty.

Nausea and vomiting are usually present late in the disease; acid eructations, pyrosis, burning in the stomach, thirst, are the results of pressure on the pyloric end of the stomach. Hiccough is sometimes present.

Some of the diseases from which it must be differential are carcinoma of the stomach, diseases of the liver, aneurism of the aorta or cœliac axis, disease of the transverse colon, chronic pancreatis, and in my case, leukæmia.

By carefully excluding these diseases one can often arrive at a diagnosis when the positive symptoms of the disease are absent. In my case I was led to believe I had a case of leukæmia by the long continued fever, the very much enlarged spleen, the anæmia, the progresssive emaciation, by failing to find the tumor in the epigastric region and by the absence of pain of a severe type.

The treatment in these cases is only symptomatic and supportive for we have not yet found a medicine for the cure of cancer.

STRANGULATED HERNIA. WITH FECAL VOMITING 3½ DAYS—OPERATION—RECOVERY.

BY WM. K. SHEA, L. R. C. P.,

PHILADELPHIA.

Thursday evening, January 8, 1891, I was called to see Mrs. R. Her history was as follows: Age, 62 years; mother of a large family, delicate for a number of years, has a mitral regurgitant murmur, and suffered for the past 13 years with a femoral hernia, for which she never wore a truss, it would often come down, and as she described, form a large lump, but was easily reduced without the aid of a physician. On Sunday, 4th of January, without any extra effort being made by her, the rupture came down and could not be re-

duced. She sent for her physician (homœopath). On his arrival he made an examination, and tried to reduce it, but found it impossible to do so, he gave her some medicine and returned each day and made ineffectual efforts to reduce the hernia. Up to the day on which I was called her suffering was very great all the time, and she vomited incessantly. Her physician told her she should be operated on, but she would be obliged to go to a Hospital, to this she and her family strongly objected. As I was her son's family physician he suggested calling me in, first having discharged the homœopath. I found the woman in a very weak state, suffering intense pain, and a large tender tumor at right saphenous opening. After placing the woman on her back and flexing the legs on the abdomen I used ordinary taxis for about 5 or 10 minutes, and felt the tumor gradually give under my fingers, and then suddenly slip away, all pain ceased and the woman was quite comfortable. I left, naturally thinking I had been successful in reducing her hernia. Next day when I called she told me that she vomited all night and that the matter was very foul-smelling. I was shown the vomit and, of course, saw that it was of a fecal nature, and told her the only chance of life was to operate at once. She objected to operation, in fact would not listen to me. Next day, Saturday, the same objection, and on Sunday I asked for consultation, or said I should leave the case. They consented, and I called my friend, Dr. M. Price, who, of course, agreed with me, and we both used our best efforts to have her consent to operation, but all to no effect. Monday morning she still held out and not until the evening of Monday did she give her consent. I at once sent for Dr. Price and Dr. Hewish, and with their kind assistance began operation.

At 9 P. M. Monday, 12th January, I made an incision in the abdomen, median line, about two inches long, passed in my two fingers and found a small knuckle of intestine tightly bound down under the femoral arch. I was obliged to make an incission to relieve it, and not a moment too soon, as it was quite black and almost gangrenous. I brought the part up to the abdominal opening, washed it by pouring some warm water over it and returned all to the abdomen, sewed it up, put on a bandage and left the rest to nature. Half an hour after the operation the bowels were naturally moved, vomiting, of course, all ceased, and she made a splendid recovery. Only once after the operation was there any cause for alarm, on the third day the temperature went down to 95°, but with stimulants and warm jars it at once came up again. Stitches were removed nine days after operation, when the wound was nicely healed up, and now she is going around feeling better than she has felt for years. Here is a case vomiting fecal matter for over 3½ days, refusing all operative interference until the very last moment, and yet she makes a splendid recovery.

Society Reports.

MEDICAL SOCIETY OF NEW JERSEY.

125TH ANNUAL MEETING, HELD AT LONG BRANCH, JUNE 23 AND 24, 1891.

The meetings were presided over by Dr. James S. Green, of Elizabeth. Three sessions were held on Tuesday, the first day, and a final one on Wednesday. The first session was opened by prayer by Rev. C. J. Young, of Elberon. The society then listened to the reading of reports of committees and the transaction of certain business. Dr. H. Mitchell, Chairman of the Committee of Arrangements, read an address of welcome, and later in the day a representative from the Mayor and City Officials, and one from the Board of Trade, addressed the body and welcomed the members to the city.

The subject for general discussion at the next meeting, named by the Business Committee, is "The true pathology of sudden death in acute pneumonia, and the best means of averting it."

Dr. Andrew H. Smith, of New York, Dr. Charles Allen, Dr. John B. Roberts and some other gentlemen, were invited to seats in the body and to participate in the proceedings.

MEDICAL HISTORY OF THE STATE FOR THE YEAR.

Dr. D. C. English, chairman of the standing committee, read the report on the medical history of the State, during the year as it had been obtained from members in different counties.

The report opens with reference to the services and resignation of the former Chairman, Dr. T. J. Smith, of Bridgeton, and of the great importance of securing fuller and more reliable data on which to base a report that will be moderately satisfactory of the Committee and worthy the perusal and study of the profession, and a plan is suggested with that aim in view.

The report then gives an outline of the epidemic of "La Grippe," giving an account of its prevalence, type and fatality in the different Counties:

Atlantic Co.—Less in extent, but as severe in type as the year before, fatality light, mainly among the aged and infirm. Many cases in their onset resembling Typhoid fever. Cases prone to relapse.

Burlington Co.—General throughout County, but varying much in its manifestations. Severe frontal headache, less severe. Mental disturbance less frequent, physical prostration not so marked and recovery more rapid than last year.

Camden Co.—Very prevalent, many cases very severe; prostration extreme, in some cases following cephalgia or acute diarrhœa, others with no appreciable prodroma.

Cape May Co.—Epidemic prevalent and severe with rheumatism and neuralgia as sequelæ. Two fatal cases among aged reported.

Cumberland Co.—Prevalent in many localities, with pneumonia as a frequent complication or sequelæ.

Essex Co.—Generally prevalent, many severe cases, many who had been affected the year before were severely prostrated. In some sections from its manifestations it had been designated "pseudo-grippe," with symptoms not so precise and clinically definite, but enough of characteristic symptoms, signs and clinical aspects to show a cognate origin and course.

Gloucester Co.—No report.

Hudson Co.—Epidemic generally prevalent, worse in some localities than the year before.

Hunterdon Co.—Epidemic in severe form; very generally complicated with diseases of air passages especially pneumonia.

Mercer Co.—Prevalent, but mild in type.

Middlesex Co.—Ditto. Two cases reported complicated with diarrhœa and intestinal hæmorrhage, with slow convalescence.

Monmouth Co.—General throughout the County, milder in type than last year. Complications, bronchial or pulmonary nature instead of the nervous disorders of last year.

Morris Co.—Prevailed throughout County in varying degrees of extent, severity and fatality. More catarrhal complications and less general aching and soreness than last year. Another contrast was the frequency with which young children and infants were attacked.

Ocean Co.—Very prevalent with heart and lung complications. Fatality light.

Passaic Co.—Epidemic with greater severity in type than the year before. No deaths from it, but many from pneumonia which attacked persons who had been debilitated by it.

Salem and Somerset Counties.—No report.

Sussex Co.—Not extensive, but many cases in several localities with pneumonia and pleurisy as complications.

Union Co.—Very prevalent throughout the County, but varied much as to extent and severity of type. Pneumonia was a frequent complication, prostration was marked from the beginning of illness, nervous symptoms were prominent. Several cases with inflamed varicose veins as a sequelæ were reported.

Several cases were also reported with double pneumonia with a lack of the usual physical and rational signs of pulmonary disease.

Warren Co.—Prevalent, a few cases very severe and several deaths in complicated cases. Three waves of the epidemic were observed, one in February, another in April and the third in June.

DIPHTHERIA.

In Camden, Morris, Monmouth and Sussex Counties but few cases reported. In Camden City, several malignant cases are reported, which were fatal.

In Cape May and Union Counties it prevailed to a slight extent in some localities.

In Burlington Co.—But few cases are reported. Four fatal cases reported in a locality where night soil was freely used on the lands occupied by the families of those attacked.

In Cumberland Co.—But few cases except in Bridgeton, which reports 191 cases of mild type, with but few deaths.

Essex Co.—Several cases occurred in certain localities, but not prevalent or attended with much fatality. Newark reports 509 cases with 190 deaths, a decided decrease over the year before (1348 cases, with 366 deaths).

Middlesex Co.—Not prevalent. New Brunswick reports only 19 cases.

Passaic Co.—Not prevalent, except in Paterson, where it prevailed of a malignant type, and 35⅛ per cent. of deaths.

SCARLATINA.

Burlington Co.—Epidemics in different localities of mild type.

Cumberland, Hunterdon, Mercer and Union Counties.—But few cases, sporadic, several localities in each County, generally of mild type, sequelæ rare, and but few deaths.

Cape May Co.—Reports epidemics in two localities, and a few cases in others.

Essex Co.—Reports a decided decrease in number of cases.

Middlesex Co.—Many cases; but hardly epidemic anywhere, mild type and but few deaths.

Passaic Co.—It prevailed in parts of the County, in Paterson to a considerable extent where the mortality was 6¼ per cent.

RUBEOLA.

Burlington, Camden, Cumberland and Ocean Counties—Report a few cases in different localities, generally of mild type.

Cape May and Warren Counties.—Epidemics in certain localities, a few cases in other sections. One case: a child 11 years old with measles of severe type, which disappeared in three days, followed by Scarlatina of severe type which ran its course when Measles again appeared and the child died. In Phillipsburg it was malignant, in one section of city where the sanitary conditions were imperfect. Several deaths occurred from lung and cerebro-spinal disease complicating.

Atlantic, Hunterdon, Mercer, Morris, Passaic, Middlesex and Union Counties—Report epidemics, mostly of mild type, but in Southern part of Hunterdon Co. many of the cases were of a severe form.

An unusual tendency to affect adults and even very old people was observed in Middlesex Co.

Essex Co.—It has prevailed to a considerable extent, but generally of a mild type.

ROTHELN.

Atlantic and Camden Counties—Report many cases, but no general prevalence.

Burlington Co.—Reports epidemics, one noteworthy feature noticed, was enlargement of the superficial lymphatics of the head and neck, accompanied by much tenderness on pressure, but exhibiting no tendency to suppuration.

Mercer Co.—Reports epidemics. Many cases difficult to distinguish from Rubeola, but the two occurring at the same time it was noted that neither afforded protection from the other, nor did roseola offer immunity from scarlatina, which seemed to show that roseola is a distinct eruptive fever and not a hybrid.

Warren Co.—It prevailed extensively in some parts of County. Many children affected with Rubeolo had an attack of Rötheln within a month of the time of their recovery from measles.

PERTUSSIS.

Camden and Hunterdon Counties—Reports a few cases, but no general prevalence.

Cumberland, Mercer, Middlesex and Monmouth Counties—Report epidemics in various localities.

MALARIAL FEVERS.

Only three Reporters make references thereto.

Essex and Hunterdon Counties—Report less prevalence of milder form and more amenable to treatment than for many years.

Middlesex Co.—Reports malaria prevalent in sections where it is usually found.

TYPHOID FEVERS.

Burlington, Camden, Cumberland, Mercer, Middlesex and Union Counties—Report but few cases, mostly of a mild type.

Burlington—51 cases reported, with 4 deaths.

Essex Co.—Newark City reports 359 cases, with 115 deaths, as against 508 cases, with 172 deaths last year.

Warren Co.—A few cases of mild type.

Hunterdon Co.—A few cases in some localities of a low and dangerous form with maximum death rate.

BOWEL DISEASES AMONG CHILDREN.

Atlantic Co.—In the interior many cases of Enteric disease in children.

Cumberland Co.—Cholera Infantum rarely seen.

Middlesex Co.—That Cholera Infantum has been much less than in former years, attributed in New Brunswick to thorough and constant disinfection (with Bromine) of the streets and foul places.

Union Co.—Usual amount, but very mild in type, yielding to simple remedies. Very few fatal cases.

RHEUMATISM.

Prevailed to an unusual extent during the Winter and Early Spring throughout *Atlantic, Cape May and Middlesex Counties;* it was of average frequency in *Hunterdon Co.*, with more complication than usual. It was one of the principal complications and sequelæ of La Grippe.

PNEUMONIA.

Camden Co.—Reports a large number of cases, but not many fatal.

Cumberland Co.—In one locality more extensive than for many years.

Essex Co.—Prevailed to a limited extent, but not of dangerous type.

Hunterdon Co.—Prevalent, and of severe form throughout the County, some fatal in early stages.

Middlesex Co.—A larger number of cases than usual, and several deaths.

Passaic Co.—In Paterson 109 deaths from it during April and May. Last year, same months, 17. The high death rate is attributed to the extreme debility and premature exposure following the grippe.

Warren Co.—In Belvidere it was prevalent. Some of the other Counties report a few cases.

OTHER DISEASES NOTED.

Laryngitis as prevalent in *Camden and Union Counties.*

Follicular Tonsillitis very prevalent in *Cape May Co.*

Conjunctivitis with a tendency to corneal ulceration, a large number of cases in some localities in *Middlesex Co.*

Dysentery as epidemic in Hamburg, *Sussex Co.*, 50 cases with 10 deaths; also in some parts of *Middlesex Co.*

Apoplexy frequent among the aged in *Hunterdon Co.*

Tuberculosis, a slight increase in *Essex Co.* and a decided decrease in *Warren Co.*

Atlantic, Passaic and Hunterdon Counties only report an unusual amount of sickness.

Basing our conclusions on the reports received and on correspondence with the Reporters in relation thereto, Intermittent, Remittent and Typhoid Fevers, Cholera Infantum and Diphtheria, have been far less prevalent in the State during the year than usual; while Pneumonia and Catarrhal affections generally, Rheumatism and Rubeola have shown a decided increase. Scarlatina has not exceeded the average of the past few years.

The Zymotic diseases were generally of a mild type, and their fatality very light. Of the epidemic "La Grippe," we believe it has been considerably less in extent, and as a rule, less severe in type than the year before, while the percentage of mortality has probably been increased by the prevalence of pneumonia as one of its principal complications.

The improvement of the Sanitary condition of the towns and cities by construction of sewers, and introduction of a pure water supply is referred to as a hopeful sign for the future healthfulness of the State.

Reference is then made to some observations on therapeutic treatment of disease.

Large doses of calomel in the beginning of treatment in Diphtheria.

Infusion of Digitalis in Scarlatina.

Veratrum viridi in full doses to abort suppuration in acute Tonsillitis; also in the first stage of pneumonia to lessen its severity and mortality.

Hypodermic injections of strychnia and nitro-glycerin in cardiac weakness in pneumonia, and especially when cardiac failure is feared in the course of pneumonia or of pleurisy.

Salol, in catarrhal and croupous pneumonia; also in Typhoid Fever to reduce temperature, modify the course of the disease, and assist digestion and assimilation; also in cases of partial retention of urine that accompanies enlarged prostate or the more common venous urethral stenosis of old men.

Peroxide of Hydrogen as a germicide in purulent surfaces and sinuses containing or discharging pus; also internally in gastralgia accompanying indigestion with flatulent eructations.

A case of Hepatic Tumor is then referred to.

Also a case resembling in many respects, one of Arsenical poisoning; persistent vomiting and purging for 24 to 36 hours; intense spasmodic pains in stomach, bowels, throat, back and extremities, loss of voice, weakness, prostration and feeble pulse; suppression of urine for 72 hours, brain continuously clear. It was a case of "La Grippe," which recovered.

The rapid strides and new successes in the field of Surgery is referred to, and the remarks of one of the Reporters in reference to Koch's discovery and the distribution and sale of his fluid or lymph.

Also the use of Anæsthetics in Midwifery, and the use of the forceps for facilitating labor.

Attention is called to the 71 diplomas and certificates filed with the County Clerk of Essex Co. during the year.

To the enlargement of the Paterson General Hospital.

To the 11 deaths of members of the Medical Society of New Jersey during the year:

Dr. Henry H. Longstreet, of Bordentown.

Dr. Denman Bevis Ingersoll, of May's Landing.

Dr. Theodore Crane, of Hackettstown.

Dr. Joseph Parrish, of Burlington.

Dr. W. H. O. Taylor, of Union Hill.

Dr. Smith H. Lewis, of Pennington.

Dr. Rodolph E. Gerlach, of Trenton.

Dr. Henry A. Kennedy, of Cape May City.

Dr. Sylvester H. Hunt, of Long Branch.

Dr. J. O. Pumeo, of Elizabeth.
Dr. Abraham Coles, of Newark.

The Report closes with an appropriate allusion to the death of the last elected Honorary Member of the State Society, Dr. Joseph Leidy, of Philadelphia, Pa.

NOMINATIONS FOR HONORARY MEMBERSHIP.

The following nominations for honorary membership were made: Drs. F. R. S. Dennis, V. P. Gibney and John H. Ripley, of New York. Referred to the Committee on Nominations.

PERMANENT DELEGATES.

The last two or three annual meetings the question had been discussed as to establishing a permanent membership. Dr. H. Mitchell, chairman of the committee "On Permanent Membership," appointed at the last annual meeting, read the report of the committee, which favored the election of permanent delegates by the different district societies, said delegates to forfeit their membership should they absent themselves from two successive annual meetings of the state society. The report and resolution were adopted.

A PLETHORIC TREASURY.

Dr. Charles Kipp, of Newark, acted in the absence of the treasurer. It appeared there was considerable surplus in the treasury, and consequently a motion to reduce the annual assessment to one dollar for the ensuing year prevailed without opposition.

THE PRESIDENT'S ANNUAL ADDRESS.

Dr. James S. Green, president of the Society, chose for the title of his address, "A View of Modern Surgery from the Standpoint of a General Practitioner." The era of modern surgery, he said, commenced with the discovery and practical use of anæsthetics. In October, 1846, Dr. Morton of Boston, demonstrated that sulphuric ether could be used in capital operations with the entire prevention of pain. In 1847, Simpson, of Edinburg, introduced chloroform, but owing to the greater danger of this agent, ether was still commonly used in this country. Speaking of cocaine and local anæsthesia, he said the possibilities of cocaine had not yet been fully appreciated by the profession at large.

PROPER CARE AND DRESSING OF WOUNDS.

More or less varied ideas had prevailed regarding the proper care and dressing of wounds previous to the modern era of surgery, but the advantages of present methods over the former might be inferred from the statement that formerly surgeons sought to produce suppuration and prevent primary union, while now they aim to prevent suppuration and obtain union by first intention. One superiority of modern surgery was related to our ability to conquer hæmorrhage during operations by means of the Esmarch bandage. Modern surgery had given special attention to the region of the abdomen, and lately a great deal of study had been given appendicitis, a condition which was now known to be of frequent occurrence, and responsible for a large number of deaths. It had been shown that early laparotomy in recurring appendicitis was not only justifiable, but was demanded.

The reader also referred to the revival of the operation of suprapubic cystotomy, the application of aseptic and antiseptic surgery in the treatment of phlegmon, to tenotomy for deformities, and emphasized the need of more general application of the principles of modern surgery to the treatment of burns. The custom still prevailed unduly of wrapping the burn in cotton and oil, and exposing it to dirt, as well as of favoring sepsis by leaving dead tissue to slough instead of scraping it away. Brain surgery, and the moral obligations of surgeons, also received attention.

Mr. Morris, representing the Long Branch Commissioners, and Mr. McFadden, of the Board of Trade, were introduced, and in well chosen words welcomed the society to Long Branch, and invited the members to visit the different points of interest.

INTUBATION OF THE LARYNX.

Dr. Walter B. Johnson, of Paterson, read an exhaustive paper on the subject of intubation of the larynx in diphtheria, including a report of eighteen cases. To be successful, intubation depended upon: 1, The use of a properly constructed instrument; 2, The skill and judgment of the operator; 3, The delicacy of the operation; 4, Knowledge of the requisite medical treatment; 5, Proper feeding and care; 6, The variety of the disease; 7, The severity of the epidemic; 8, The extent of the complications; 9, Careful examination of the patient at frequent intervals and preparation for combatting complications or obstructions to the tube.

Regarding the construction of the tube, the author quoted from Dr. Dillon Brown's paper which contained an account of the steps in the perfection of the tube as it had been invented by Dr. O'Dwyer. Instruments were exhibited. Of the eighteen cases

reported in the paper, only three recovered. In all the operation was performed during the night of the fatal epidemic of diphtheria in Paterson between July 1890, and February, 1891. In seven months during this epidemic 259 cases of diptheria were reported, with 103 deaths. The eighteen cases undoubtedly would have shown a more favorable result had the epidemic not been of so severe a form. The tube was a source of relief and comfort in nearly every case. Even if the mortality had not been lessened, the relief from dyspnœa and the comfort afforded would justify the operation.

Delegates from other states were present, as follows: Dr. Crothers, of Connecticut, Dr. Swing, of Pennsylvania, Drs. Furbeck and Willy Meyer, of New York; also two members from the Pharmaceutical Association, New Jersey.

DISCUSSION ON TUBERCULOSIS.

The discussion upon the subject presented at the last annual meeting, "Tuberculosis—the Potential Factors in its Spread, Whether Hereditary Capacity, Inherited Bacillus, or Transmission from Inferior Animals," was opened with a paper by Dr. Edgar Holden, of Newark. Comparatively few doubted at present the ætiological relation between tuberculosis and the tubercle bacillus of Koch. The two prime factors in discussing the subject under consideration were, the bacillus, and man's vulnerability. The tubercle bacillus could be shown to be propagated by inhalation, by inoculation, by ingestion, and by inheritance, although the proof of some of these modes of propagation were not altogether convincing. The author reviewed the nature of this proof, and gave considerable credit to Philadelphia, Boston, and Baltimore. The chief method of acquiring tuberculosis was through inhalation of dried particles in the air containing the bacillus tuberculosis. The much greater danger from this source was clearly shown to exist in rooms where those suffering from tuberculosis lived, and especially where no attention was given the proper disposal of the sputa. The possibility of spreading the disease by inoculation was worthy of thought by butchers and by physicians in making autopsies and performing operations. As to propagation by ingestion of food, it might be stated that Shurely and Gibbs, of Detroit, denied that the tubercle bacillus of animals and that of man were identical. But the author thought there was satisfactory evidence of the danger of tuberculosis in the meat of all animals, however limited might be the disease. Nor was it necessary that the udder itself be diseased to make the milk of a tubercular cow unsafe. In this country three to twelve out of every hundred cows were said to have tuberculosis. The need of legislative action was manifest.

Regarding the question of transmission of tuberculosis by inheritance, there had been much dispute. The author did not doubt the inheritance of a vulnerability or tendency to the disease, but could only review the literature regarding the possibility of the tubercle bacillus being transmitted from the mother to the offspring. Positive evidence on this subject was hardly to be found, although a few authors had claimed to have found the bacillus in the fœtus before birth.

Elsewhere Dr. Holden had shown by statistics of life insurance that few persons lived to seventy-five years among whose near relatives there had been consumption, while it was not at all difficult from the same statistics to find over one hundred persons over seventy-five years of age among whose relatives there was no history of consumption. In concluding his paper the author expressed his conviction that the spread of tuberculosis was in proportion to exposure to the bacillus and the vulnerability of the individual.

Dr. J. W. Stickler, of Orange, held essentially the views expressed by the author, in proof of which views he analysed some statistics given by the late Prof. Austin Flint, and reviewed some facts stated in literature. Some cases had been reported of tuberculosis in the fœtus, or in the infant dying soon after birth; but the reporter had not stated that he had found the bacillus. The author thought that if the bacillus itself was inherited it must be limited to cases of tuberculosis of the testes, of the ovaries, of the placenta, or general infection.

DIET AND CARE OF NEW JERSEY COWS.

Dr. Henry L. Coit, of Newark, chairman of the committee "To investigate the subject of the influence of diet and care of cows upon the constitution of their milk, and the action of this milk upon the human subject when it proves injurious: Further, to determine what current practices in their feeding and care are prejudicial to this probuct." Read the report, which was only a provisional one. The committee was to consist of forty members, different counties to be represented, and Dr. Coit had found the work of organizing the committee and carrying on the investigation a slow one because a great one. The paper pointed out some reasons for making this investigation, all based on the import-

ance of obtaining pure milk for food, especially as food for infants. That the diet had a marked influence on the constitution of the milk had often been shown, and he had no hesitation in saying that a large proportion of the dairymen of his own state used unhealthful products, such as were obtained from breweries, &c. In his opinion there ought to be a constant relation between the price of milk and its quality. The dairy people got only two cents a quart for their milk while the average cost of good milk had been shown to be one and eight-tenths cent. The temptation to use unhealthful food products was evident.

The committee's request to be continued was granted.

SOME RECENT VIEWS ON PERITONITIS.

Dr. John G. Ryerson, third vice-president, read a paper with this title. The interest in the appendix, he said, was so widespread at the present time, and disease here so frequent, that the consideration of peritonitis in general would excite little interest. He would, therefore, speak only of a few points in the history of peritonitis of which the appendix might be the cause.

McBurney and other surgeons of to-day advocated early surgical interference in appendicitis and removal of the appendix. They taught that the surgeon should be called in early by the attending physician; that, if possible, he should make frequent visits before operating in order to become familiar with the case by personal observation. Now, we know that septic peritonitis begins early; that from the beginning the conditions necessary for its septic character occur, and that when once this form of peritonitis sets in even surgical interference will not save the patient. In this form of the disease, therefore, there lay little hope of diminishing the mortality rate. But under the older method of treatment, according to Noyes, the percentage of deaths was only fifteen, and even those who favored modern surgical treatment admitted that one-half, or at least two-fifths, of this percentage could be placed to the credit of septic peritonitis. Reasoning in this way, and taking the figures of those who favored surgical interference, the author arrived at the conclusion that modern surgery had left only five per cent. of all cases on which to improve of existing modes of treatment. While, therefore, the surgeon to-day was most active and zealous, he thought the physician should not give up the field. There were two methods of medical treatment in vogue, the opium and the saline. For his own part, he favored the old fashioned method introduced by Alonzo Clark, of quieting pain and stopping peristaltic action by the administration of a sufficient amount of opium to accomplish this purpose. He believed the general adoption of this method would be more likely to reduce the mortality rate than more frequent resort to surgical interference.

In the ætiology of appendicitis, the possibility of its being of epidemic character had scarcely received mention, yet its history pointed pretty strongly in that direction. This suggested the possibility of the blood being at fault, or a microbe being the cause, and of grounds for using drugs which had not yet been appreciated.

AN ATTEMPT TO SHOW WHAT NEW JERSEY SURGEONS HAVE DONE IN ABDOMINAL SURGERY.

Dr. Edward J. Ill, gave statistics in this paper based on more or less limited reports of operations in abdominal surgery sent him by different physicians and surgeons of the state, including a brief account of nearly one hundred cases in his own practice. It seemed that, in spite of the fact that New Jersey lay between two great surgical centers, Philadelphia and New York, a large number of operations in abdominal surgery had been performed by her own medical profession.

OFFICERS FOR THE ENSUING YEAR.

For President, Dr. E. J. Marsh, of Paterson; First Vice-President, Dr. George T. Welch, of Passaic; Second Vice-President, Dr. John G. Ryerson, of Boonton; Third Vice-President, Dr. Sproull; Corresponding Secretary, Dr. William Elmer, Jr.; Recording Secretary, Dr. William Pierson; Treasurer, Dr. Archibald Mercer. Place of meeting, Atlantic City.

SELECTED FORMULÆ.

THE EMPLOYMENT OF KOLA NUT.

Huchard gives the following prescription in the *Revue Général de Clinique et de Thérapeutique* for the administration of kola nut:

℞

Tincture of kola	1	ounce.
Tincture of coca	1	ounce.
Tincture of squills	½	ounce.
Tincture of digitalis	2	drachms.
Simple syrup	2½	ounces.
Red wine	1	pint.—M.

Allow the sediment to settle, and then decant and filter. Two or three teaspoonfuls

of this mixture may be given each day for eight or ten days in cases of cardiac disease requiring tonics. In other cases the following may be employed:

℞ Fluid extract of kola } of each 6 drachms. M.
Fluid extract of coca }

A small teaspoonful should be taken after luncheon, with a little simple syrup or Malaga wine. This mixture should not be given at night, because the kola produces insomnia in some patients. The dose of it should be from 20 to 30 drops three times a day: as, for example, at 8 o'clock in the morning, at midday, and at 4 o'clock in the afternoon.—*Med. News.*

PRURITIS ANI.

Kelsey prescribes acetate of potassium, ten grains three times a day internally, and a ten per cent. solution of nitrate of silver locally, to be followed by the following ointment:

℞ Menthol.....1 drachm.
Simple cerate.....2 ounces.
Oil sweet almonds.....1 ounce.
Carbolic acid.....1 drachm.
Powdered oxida of zinc.....2 drachms.
M. Sig. Apply morning, noon, and night, after cleansing the parts.

TREATMENT OF TYPHOID FEVER.

The *Revue Général de Clinqiue et de Thérapeutique* gives the following method used by Tessier in the treatment of typhoid fever: Morning and night a powder composed of 5 grains of alpha-napthol and 3 grains of salicylate of bismuth is given. In addition four injections are used, at intervals of twenty-four hours, with the object of increasing diuresis. After the midday injection he prescribes the following tonic and antipyretic mixture:

℞ Extract of chinchona..... ..... 1 drachm.
Sulphate of quinine.....15 grains.
Tincture of valerian..... 1 ounce. M.
Teaspoonful at a dose.

Tessier also applies cold compresses to the head and abdomen, and the patient is allowed 10 ounces of Bordeaux wine and one and a half pints of milk or broth in the twenty-four hours. He employs alpha-naphthol in preference to beta-naphthol because the latter is very much more poisonous; thus, to produce poisoning in a man of ordinary weight it is necessary that twice as much alpha-naphthol be given as of beta-naphthol. In consequence it is possible to give larger doses of alpha-naphthol without danger, and obtain thereby a greater degree of intestinal antisepsis. The cold baths which he recommends augment, in his opinion, the elimination of toxic substances in the urine, and the naphthol stops their production in the intestine.—*Med. News.*

GONORRHŒA.

Thomas R. Neilson states that the plan of internal treatment which he has pursued for so many years past, consists, first, during the earlier stages of the disease, in the administration of an alkaline sedative mixture, with the purpose of alleviating the scalding caused by urination, the tendency to frequent micturition and to chordee. The standard formula in his dispensary practice has been:

℞ Potass. acetat.....℥iij--℥ss.
Potass. bromid.....℥jss.
Acid. boric.....℥ij ℈ij.
Tinct. belladon.....ℳxxx.
Liq. potass. citrat... ....℥viij. M.
Sig. A teaspoonful in water every three or four hours.

Secondly, as soon as the symptoms are in a measure relieved, the administration of either oleoresin of cubebs and balsam copaiba in capsule, or of cubebs alone in powder, in teaspoonful doses, or finally, where chordee is troublesome, a combination of two parts by weight of powdered cubebs and one part of bromide of potassium, given in the same doses, and from three to four times daily.
—*Univ. Med. Magazine.*

TREATMENT OF DYSENTERY AND OXYURIS WITH NAPHTHALIN.

Dr. M. C. Minerbi, in the *Journal de Méd. de Paris*, May 31, 1891, speaks highly of the value of naphthalin in the treatment of both dysentery and oxyuris.

In the former instance the drug is used either in the form of suppositories or oily injections. The suppositories are prepared by the following formula:

℞ Cocoa butter
Naphthalin, aa.....10.0 grammes.
M.

If the ulcerations are seated so high up in the intestine that the suppositories cannot affect them, the author resorts to the following enemata:

℞ Olive oil.....20.0 grammes.
Naphthalin..... 5.0 grammes.
M.

In dysentery very frequently, owing to the existing tenesmus, these injections cannot be retained for more than half an hour. In such cases the injection should be repeated three or four times in twenty-four hours. Ultimately, however, the patient will be able

to retain the injection until it is absorbed. One great advantage of the treatment is that it does not produce constipation.

Rosbach employs naphthalin in dysentery in the following formula, which, however, Minerbi considers inferior to that advocated by himself.

℞
Boiling water.....100.0 grammes.
Naphthalin..... 5.0 grammes.
Decoction of marshmallow...500.0 grammes.
M. Sig. For one injection.

The mixture should be heated to 37° C. at the time of using.

The treatment is contraindicated in cases where the ulcerations extend to the small intestine, which is, however, rare.

Dr. Minerbi has also used naphthalin with considerable success in the treatment of oxyuris vermicularis. Eleven children, troubled with this parasite, were completely cured within eight days.

The formula employed was the following:

℞
Naphthalin.....1.0--1.5 grammes.
Olive oil..... 40--60 grammes.
M. Sig For one injection.

In treating the same trouble in adults a stronger formula may be advantageously employed, as follows:

℞
Naphthalin..... 5--6 grammes.
Olive oil.....60--80 grammes.
M. Sig. For one injection.

TREATMENT OF SYPHILIS DURING PREGNANCY.

Dr. E. Besnier, in the *Journal de Méd. de Paris*, May 31, 1891, claims to have found the following treatment for syphilis during pregnancy, both safe and efficacious.

I. *Tonic treatment.*—This consists of a good nourishing diet, syrup of iodide of iron and preparations of cinchona internally.

II. *Specific treatment.*—One pill of the following formula should be administered daily:

℞
Bichloride of mercury.....0.01 gramme.
Extract of opium.....0.005 gramme.
Extract of gentian..... .0.005 gramme.
Glycerin, q. s.
For one pill.

III. Simultaneously iodide of potassium should be exhibited in doses of gramme 0.5 to gramme 1.0.

This treatment should be continued during the entire course of pregnancy. An increase of the patient's weight is a sign of its success.

PYRIDINE IN GONORRHŒA.

℞
Pyridine..... .ɱv
Aq. distillat.....ʒiij
Sig. One injection daily.

—*Rademacker.*

TREATMENT OF OTALGIA.

℞
Chlorinated camphor..... 5.0 grammes.
Glycerin.....30.0 grammes.
Oil of sweet almonds.....10.0 grammes.
M. Sig. For the ear.

Place a small tampon of cotton, wet with this mixture, in the ear.—*Allg. Wiener Med. Zeitung.*

PURGATIVE PILL.

The following formula is recommended by Dr. Ball, in the *Journal de Méd. de Paris*, May 31, 1891, as constituting a pleasant and efficient purgative pill.

℞
Socotrine aloes..... 1.0 gramme.
Resin of scammony.....0.50 gramme.
Resin of jalap.....0.50 gramme.
Calomel.....0.50 gramme.
Extract of belladonna.....0.23 gramme.
Extract of hyoscyamus.....0.25 gramme.
Castile soap, q. s.
To make 40 pill. Dose, 3 to 5 pills a day.

FOR ECZEMA.

According to the *Centralb. für die gesammile Therapie*, the following formula will be found very useful in the treatment of eczema not of a chronic nature.

℞
Thymol..... 2.0 grammes.
Oxide of zinc
Starch aa.....25.0 grammes.
Lanolin.....50.0 grammes.
M. fiat unguentum, et Sig. Salve, to be applied to the affected parts.

SOLVENT FOR DIPHTHERITIC MEMBRANE.

℞
Pepsin.....ʒiss.
Acid. hydrochloric. dilut.....ɱj.
Aquæ destillat
Glycerini, aa.....ʒss. M.
Apply to the surface.

—*Canada Lancet.*

SALICYLATE OF SODIUM FOR CORYZA.

The *Journal de Médecine de Paris* gives the following:

℞
Salicylate of sodium
Syrup of orange } aa.....ʒss.
Peppermint water.....ʒvi. M.

At the onset of the attack a teaspoonful to a dessertspoonful should be given every three or four hours.

COCAINE IN ASTHMA.

C. R. D. Sylva (*Indian Med. Gaz.*, March, 1891) reports a case in which very severe attacks of asthma were in a few minutes entirely relieved by the following subcutaneous injection:

℞
Cocaine hydrochlor.
Morph. sulph., aa.....¼ gr.
Aquæ distil., q. s. M.

THE

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The Editor will be pleased to get medical news, but it is important that brevity and actual interest shall characterize communications intended for publication.

LEADING ARTICLE.

ANTISEPTICS IN THE TREATMENT OF TYFHOID FEVER.

Since the germ theory of disease has become established upon a firm scientific basis, the idea of treatment directed towards the neutralization of these specific organic poisons has naturally arisen. Although much progress has been already made in this direction in the treatment of many medical affections, it must be admitted that the results obtained in surgical practice are of far more practical importance than those arising from the use of antiseptics in non-surgical practice. To appreciate this we have only to glance over Hospital statistics, and find that whereas the mortality of all grave surgical procedures is immensely less, the same cannot be proven of those medical cases in which a living organism has been shown to be the essential cause. The cause of this difference in statistics is obviously the comparative ease of application of antiseptic treatment in surgical practice, and the insurmountable difficulties which at present prevent its use in cases where the seat of infection is the intestinal canal, and the blood itself.

While the ideal antiseptic has yet to be discovered, much good work has been done in this direction by many prominent clinicians, and perhaps no disease has been more vigorously attacked by antiseptic remedies, than typhoid fever. Indeed, it may be affirmed with some truth, that the idea of maintaining, as well as possible, intestinal antisepsis in this disease, occurs to almost every practitioner of the present day, and in the opinion of some, it is the method by which the best results can be obtained. No agent has yet been discovered which can affect the poison of typhoid fever in the circulating blood without being equally poisonous to the patient, so that, at present the questions are: Can we disinfect the intestinal canal, and thus favorably influence the course of the disease, does this method of treatment give better results than when other measures are adopted?

With the numerous modes of treating typhoid fever now in vogue, the answers to these questions cannot be authoritively made at present, but it is generally admitted that we possess certain antiseptic remedies which are capable of making the stools less offensive, of limiting somewhat the duration of the fever, and of lessening the abdominal tenderness and meteorism. Such agents are very commonly employed as adjuncts to other methods of treatment. But the effect of a *purely* antiseptic treatment upon the mortality needs further observation.

The maintainence of intestinal antisepsis depends largely upon the diet, which should be of such character as to be readily absorbed, and so contribute as little as possible to fermentation. The quantity of food is also most important, and no more should be given than can be readily assimilated, for, unless this is done, the food collects in the intestines, rapidly undergoes fermentation with the production of noxious solids and gases, and painful tympanites results. For this reason milk, diluted with lime-water, light watery soups, and proper amounts of pure water would seem the rational diet, since they are readily assimilated, and furnish plenty of liquid to carry away the waste products of tissue changes. Such a diet leaves a minimum of residue in the intestines, and hence is more suitable when intestinal antisepsis is aimed at.

The cheap drugs which have been lately used to promote antisepsis in the intestinal tract, are: naphthol, thymol, salicylate of bismuth, mercury in some form, carbinate of bismuth, chlorine, hydrochloric acid, turpentine, sulphide of carbon, boric acid, benzoic acid, carbolic acid, quinine, hydro-naphthol, and a number of others. The reported accounts of the use of any of these agents as an exclusive mode of treatment are too meagre to admit of any intelligent comparison of their relative values. They are all used for the same purpose, and none of them has proved entirely acceptable. Dr. J. Burney Yeo, Professor of Clinical Therapeutics, at King's College, London, has had very marked success with a mixture of chlorine and quinine, and in a late lecture (*The Lancet*, April 18, 1891) he highly recommends it, and strongly urges the expediency of some means being always adopted to secure as perfect an antisepsis as possible in the intestinal tract. To those interested in this subject, this lecture is well worth careful reading, as it details the history of the application of antiseptics in typhoid fever, as well as gives his own experience. Dr. J. Mitchell Clarke, has experimented favorably (*The Practioner*, Dec., 1888 and July, 1890) with *B*-naphthol and hydro-naphthol. His results were 1, "Reduction of the average duration of the fever; 2, Less offensive stools; 3, Less abdominal distention; 4, Early cleansing of the tongue and less dryness of mouth and lips; 5, Abscence of albuminuria; 6, Convalescence more rapid and strength less reduced; 7, Less risk of propagation of the disease; 8, Diminished tendency to secondary complications." Dr. Yeo states, in his lecture above mentioned, that M. Maximovitch prefers *A*-naphthol to *B*-naphthol, because it is three times less tonic, yet prevents the development of the typhoid bacillus when used in the proportion of 1 part in 10,000; and also that Dr. Moncorvo (*Satilliti*, Feb. 1890) has given *B*-naphthol to children in doses of gr. xv to gr. xxx, and that such doses were tolerated perfectly.

Liebermeister (Von Ziemssen's Cyclopædia of Practical Med.) urges the claims of mercury and iodine, giving the latter dissolved in a solution of the iodide potassium. Mercury he employs in the form of calomel. He found the mortality less in two hundred cases treated by calomel, than in a large number treated without it.

Experiences of leading physicians might be multiplied, but as they are too widely different as regards the conditions surrounding their cases, and the drug employed, to secure intestinal antisepsis, it is impossible to more than gain a general idea of the value of this treatment. That the idea of intestinal antisepsis is rational all admit, and it also may safely be said, that the experience already obtained from the use of antiseptics is highly encouraging. The end to be ob-

tained is most desirable, for by influencing the local conditian of the gut, the general toxæmia seems apparently proportionately lessened. Only time and an experience long enough to permit of the comparrison of reliable statistics of the use of the several remedies lately brought forward, can settle the question as to the best mode of securing the minimum amount of septic fermentation in the intestine, and, as has already been said, the kind and quantity of the food will prove an important factor towards this result. In this connection, the use of pepsin suggests itself, to complete the imperfect gastric digestion, and it is routinely given by Dr. W. H. Thomson, at the Roosevelt Hospital, New York, in conjunction with dilute mineral acids.

Since it has been proven beyond doubt that antiseptics play a most important role in the modern treatment of typhoid fever, it becomes every practitioner of medicine to consider carefully the means he shall employ to fulfill the indication which always is present in this disease. No one drug or mixture can be solely recommended for this purpose, and further, in many cases certain remedies are contra-indicated by the existing conditions of the stomach, but in all cases where no such contra-indication is present, an antiseptic of known value should constitute a part of the treatment, for its *specific effect* upon the bacillus. The favorable experience of chlorine and quinine by Dr. Yeo, of calomel aud iodine by Liebermeister and others, and the naphthol and hydro-naphthol by Clarke, (as well as the reported value of many other antiseptic remedies) allows of considerable latitude in the choice of the drug to be employed. It is to be hoped that these antiseptics will be given a larger trial in the Hospitals of this country, side by side with other modes of treatment, including the treatment by cold water baths, as introduced by Brand, and it is needless to say, these statistics obtained in this way, from single large Hospitals, will be most valuable in determining which drug, of those already employed, will most adequately fulfill the purpose of limiting to a minimum the production of toxic ptomaines, or similar substances, and thus prevent their introdution into the already poisoned blood.

All our knowlege of the pathological conditions which exist in typhoid fever, suggests persistent effort towards this line of treatment, as being the most rational and direct method of combating the disease, and although the remedies as at present used may fall far short of perfection, still, as has been said, the experience of acute observers proves how much room there is for hope in this direction.

Enough proof of the efficacy of the antiseptic treatment of typhoid fever is forthcoming to warrant the assertion that it should be given a high place among the measures usually employed.

Book Reviews.

DIGESTION AND DIET.—By Sir William Roberts, M. D., F. R. S., Philadelphia. Lea Brothers & Co., 1891.

This book embraces, in one volume, all the contributions made by the author, at various times, to the subjects relating to Digestion, Dietetics and Dyspepsia. It is arranged in four groups or sections.

Section I., is occupied in the consideration of *digestion and the digestive ferments.*

Under the head of "The Preparation of Artificial Digestive Juices," the author records the results of a series of experiments made, with the object of ascertaining the best preservative of artificial degestive juices, which either had little taste and smell, or one which was volatile and could be got rid of by vaporisation. The investigations were begun with the ultimate view of obtaining a solution of these ferments which could be administered as a medicine by the mouth, or which could be employed in the preparation of artificially digested food.

After a number of trials, these solutions were adopted: Dilute Spirit; Boracic Solution, and Chloroform Water. Preferance being given to the first.

Section II., deals with the subject of *dietetics*, and it contains much useful information of undoubted value to the busy practitioner.

Section III., treats of the *preparation of food for invalids.* As this is a matter of no little importance to the general medical man,

and has considerable bearing upon the success of any treatment, the author has justly seen fit to occupy considerable space to the consideration of such topics as the preparation of ordinary food for invalids; the preparation and use of artificially digested food, the use of malt, and especially of malt infusion, for the free digestion of starch food, etc.

SECTION IV. on *dyspepsia*, relates to the so-called acid dyspepsia of otherwise healthy persons.

The entire work is well worthy of the efforts of its distinguished author, and not only will amply repay the time spent in a careful perusal of its contents, but it often will be found a very convenient book to have in the library for ready reference.

MEMORIAL SKETCHES OF DR. MOSES GUNN. By his wife.

A book of 380 pages, with the above title, is filled with a well-written description of the personal attributes, and scholarly attainments and professional success of a man who rose to the first of American surgeons.

Born in East Bloomfield, N. Y., April 20, 1822, of good parentage, he was liberally educated, graduating in medicine in 1846, and the same year commencing lectures upon Anatomy at Ann Arbor, which he continued until the founding of the medical department of the University of Ann Arbor, Michigan. He was then elected Professor of Surgery, and held the chair until 1867, when he resigned to accept a similar position in the Rush Medical College, Chicage. Since then his reputation has extended to every part of the country as an eminent teacher.

These sketches, by his wife, will undoubtedly come to his many personal friends as a delightful reminder of the man, containing, as they do, many little stories which cannot fail to perpetuate the memory of his many virtues. To others, also, who have never viewed a doctor's life from the standpoint of his wife, the book will be worth reading. None can fail to gather some lesson in its pages, regarding the successive periods in medical life, and over all the pages is the pathos of a wife's description.

EUCALYPTUS DISINFECTANT.

The oil may be dissolved in alcohol, 1 in 20; it may be used in powder, 2 parts oil, 10 borax, 60 infusorial earth or other cheap absorbent material; even sawdust would answer readily and effectively.

PERISCOPE.

THERAPEUTICS.

THE PLACE OF MERCURY IN THERAPEUTICS.

Dr. E. P. Hurd, in the *N. C. Med. Jour.* reaches the following conclusions:

1. Mercury must still take the palm over all other remedies in the treatment of secondary syphilis. Here the choice is between two evils; but the syphilitic poison is a greater blood-spoiler than mercury when judiciously administered; and, in antagonizing and destroying the virus of syphilis and preventing its ravages on the blood, mercury becomes a genuine reconstituent tonic. The mercurial treatment is not to be commenced *until the syphilis has declared itself*, and is to be instituted only in the secondary stage.

2. Mercury (under the form of calomel) has no place in medicine as an antiphlogistic or alterative, and its employment in fractional doses in combating inflammations, whether acute or chronic, should be absolutely discarded.

3. Calomel has a limited usefulness in infantile therapeutics, but principally as a gastric sedative and as a thorough antiseptic cathartic.

4. Calomel is an efficient purgative, stimulating the secretions of the intestines and liver and promoting intestinal peristalsis; it remains so long unchanged in the alimentary canal that it exercises a local antiseptic and sedative effect, and hence proves valuable in many morbid states of that canal. As a cathartic it is good to clear the *primæ viæ*, especially when no other cathartic can be borne, owing to irritability of the stomach; in the onset of some inflammatory or febrile diseases it may have a useful depurative and even derivative effect.

5. In the ordinary "bilious" complaints calomel has a place which is entirely subordinate to other more rational and hygienic modes of treatment.

ANTIPYRIN IN PLEURITIC EFFUSIONS.

At a meeting of the Société Nationale de Médecine de Lyon, on April 20th (*Lyon Médical*, May 10th, 1891,) M. Clement presented a communication on the effect of antipyrin in pleuritic effusions. He said his attention had been called to the subject three years before, and his conclusions were based on observations made in some twenty cases.

When a patient comes under his care with signs of pleural effusion he marks the upper limit of dullness with lunar caustic, and can thus note the slightest variation in the amount of the fluid. Whether fever be present or not, he at once administers antipyrin without any other medication whatever. In all cases there was, on the following or at latest the day after, a marked reduction in the height to which the dulness reached. In some cases the dullness disappeared after forty-eight hours' treatment, and in two or three the fluid was completely absorbed in twenty-four hours. In no case was the effect delayed beyond four days. The dose given was, as a rule, 6 grammes a day, 1 gramme being given every four hours. After absorption of the fluid the treatment should be continued for some days longer, in order to prevent relapse, the daily dose being, however, reduced to 4 grammes. The cases treated by M. Clement included examples of acute pleurisy *a frigore* and latent pleurisy; both forms yielded readily to treatment, the effect being rather more rapid in the latter than in the former. The treatment failed when the effusion was purulent or bloody. In cases in which the whole pleural cavity was filled with fluid, M. Clement did not feel himself justified in trying the antipyrin treatment, but performed thoracocentesis without delay. With regard to the *modus operandi* of the remedy, he says that even when resolution was almost immediate, nothing like diuresis took place, the amount of urine being increased only from 100 to 200 grammes in the twenty-four hours. In some patients no diaphoresis was observed; in others it occurred after resolution had taken place. Resolution occurred as rapidly in the non-febrile as in the febrile cases. M. Clement thinks antipyrin has a specific action on nearly all inflammatory processes, and it is to this that he attributes its beneficial effect in pleural effusions.—*Brit. Med. Jour.*

SALOL IN TYPHOID FEVER.

Dr. Frank P. Wilson, writing in the *Southern Clinic* for March, 1891, says that he has found salol to be a very satifactory remedy in rheumatism, but that in infantile diarrhœa he has also found its administratin attended with good results. The use of one grain of the drug every four hours promptly checked the diarrhœa, and the continued administration of the remedy two or three times a day for a few days effectually prevented a relapse. In typhoid fever he had had very favorable results, and in all cases in which he had given it from the onset of the disease there was no tympanites, no diarrhœa, no dry tongue, nor sordes on the teeth. Even when the treatment was begun late in the course of the disease, when the symptoms were already grave, the whole condition was changed for the better within two days by two or three grain doses of salol every four hours. He did not believe that the duration of the fever was shortened at all, but all the symptoms were ameliorated, delirium was kept away, and the patient preserved a desire for food, usually waiting anxiously for the milk hour to come around. One grain of salol was given every four to six hours, except when there was severe diarrhœa, when the dose was doubled for a short time.

CACTINA: A NEW AND VALUABLE CARDIAC STIMULANT.

Dr. O. M. Myers, has contributed to the *N. Y. Med. Jour.*, a very suggestive article on cactina, which is the proximate principle of the plant *Cereus grandiflora* (the night-blooming cereus; Ger., *Königin der Nacht*), natural order *Cactaceæ*, which is indigenous to tropical America. The active principle has been successfully isolated by Frederick W. Sultan, Ph. G., the well-known pharmaceutical chemist of St. Louis. For this purpose he employs the young flowers and stems of the Mexican variety, in which the yield is greater and more constant than in other species. It is thus described: "The stem is branching, fleshy, green, and five or six angled. The angles are beset with clusters of five or six short radiating spines. The numerous imbricated calyx lobes are linear, acute, brownish, the inner ones yellow. The flowers, which open in the night, are very fragrant and produce an orange-colored, internally white berry the size of an egg. The flower of this species is decidedly the richer in active principle and yields 0.021 to the 1,000, or over two per cent."

Physiological Action.—Locally, cactina is absolutely non-irritant, a ten-per-cent. solution applied to the conjunctiva producing no noticeable effect.

Therapeutic doses. in man and animals, produce an acceleration of the pulse and a rise in the arterial pressure.

Toxic doses, in animals, produce primarily an acceleration of the pulse-rate and a rise in the arterial pressure, but, secondarily, notably diminish both. The cardiac pulsations become arrhythmical and finally cease,

the heart being arrested in systole. The systoles, just before death, become very incomplete, probably due, as will be shown below, to a condition of superirritability of the cardiac ganglia. Death is preceded by tetanic and clonic convulsions, due to overstimulation of the motor side of the spinal cord. That the convulsions are not of cerebral origin is evident, as they occur after section of the cord in the upper cervical region. The motor nerves remain unaffected, for, after the death of the animal, galvanization produces contraction of the muscle. Cactina is therefore a powerful *motor spinal stimulant.*

SUMMARY.—Cactina in therapeutic doses—

1. *Increases the musculo-motor energy* of the heart, probably through its influence upon the intracardiac motor and accelerator ganglia, in consequence of which the cardiac impulses become regular and much stronger.

2. *Elevates the arterial tension,* increasing correspondingly the height and force of the pulse wave. This is produced by—*a*, increased cardiac action; *b*, stimulation of the vaso-motor center at the base of the brain.

3. *Influences the nervous system* by its direct action upon the motor centers of the spinal cord, thus increasing the reflexes and elevating the general nervous tone. Herein cactina resembles strychnine, and other points of similarity are evinced by clinical observation.

Therapeutics.—It logically follows, if conclusions as to its physiological action are correct, that in cactina we have a powerful cardiac tonic-stimulant. Clinical observation teaches that its greatest value is manifest in functional disturbances of the heart, as simple dilatation and cardio-muscular atony (resulting from deficient innervation and nutrition) without organic lesions. If valvular disease exists, accompanied with dilatation. In conditions of cardiac and general muscular relaxation with impaired nerve energy, and in case of "irritable heart," "tobacco heart," etc., the drug accomplishes excellent results; probably by, *a*, stimulation of the spinal motor-nerve centers; *b*, constantly stimulating the heart muscle to action and thereby increasing its nutrition and development.

A special indication for its use is during the critical periods of adynamic fevers, as it combines the elements of a heart and spinal motor stimulant.

Unlike digitalis, cactina may be administered continuously without fear of exciting gastric disturbance, and the objectionable cumulative action of the former drug is entirely absent. In short, cactina may be employed with benefit in all varities of functional cardiac and circulatory disturbances and in organic heart disease, except in cases of *mitral stenosis,* where digitalis is to be preferred on account of its power of prolonging the diastolic period, thus affording the ventricle power and time to entirely empty itself. *Per contra* in *aortic insufficiency,* the short diastole produced by cactina allows no time for regurgitation of blood into the ventricle, whereas digitalis, by prolonging the diastolic period, favors just what we should seek to prevent.

Preparations of *Cereus grandiflora, C. Bonplandii, C. McDonaldii,* and other allied varieties, have long since been employed in medicine, but the results have been uncertain. This is accounted for by the fact that the yield of active principle varies greatly in the different species of the plant and in the same species in different habitats. Under such circumstances the strength of preparations would necessarily be so inconstant as to make them unreliable for use. The same may be said of many other valuable drugs, such as cannabis indica, ergot, etc., of which two preparations of the same strength can hardly be found. The difficulty has been entirely obviated in the case of *Cereus grandiflora,* for, by the isolation of its active principle, we have the means of employing it in constant and definite quantities.

THE TREATMENT OF CHRONIC ATROPHIC RHINITIS (OZÆNA).

As Dr. De Havilland Hall, writes in the *Med. Press*:

Though local treatment is all important in atrophic rhinitis, it is well before commencing it to see if there be any underlying general condition of ill-health which needs correction. If anæmia be present the combination of ten grains of the ammonio-citrate of iron with three minims of arsenical solution given thrice daily exercises a beneficial effect. If there be any tendency to phthisis cod-liver oil should be administered. The iodides do not seem to have any good effect in the ozæna due to atrophic rhinitis. The essential point in the local treatment is the thorough cleansing of the nasal cavities. This may be effected in three ways:—(1) By means of the douche. (2) By the use of the anterior and posterior syringe. (3) By spraying. At one time I used the douche almost exclusively, but of late years I have entirely given it up. Several cases of otitis media due to the fluid passing up the Eustachian

while the douche was in operation have been recorded, and though I had had no personal experience of this accident it was one of the reasons which induced me to discontinue this form of treatment. Pins' modification of the douche to which Dr. Ball has recently directed attention seems to obviate this objection. The anterior and posterior syringe answers fairly well in the less severe forms of the disease, but where crusts have collected on the sides and roof of the nasal passages the only effectual method of washing them away is by means of a spray emitted with considerable force from the apparatus. For those who prefer the douche or the syringe the following solution may be employed.

℞

Sodii bicarb., Boracis, aa.....ʒj;
Glycerini acidi carbol.....ʒij;
Aquam, ad.....Oss.

This is known as Dobell's solution.

Bayer, however, states that carbolic acid is not to be recommended locally because it often completely destroys the power of smelling in those cases in which it has been preserved. Chlorate of potassium, or liquor potass. permanganatis may be substituted for the borax, great care should be taken that the solution used should be of a suitable temperature.

I have found "Listerine," an American preparation containing thyme, eucalyptus, and other essential oils, together with benzoboracic acid, a most serviceable and pleasant disinfectant. It may be conveniently employed in Dobell's solution instead of the glycerine and carbolic acid in proportion of one or two of listerine to ten of the lotion. As on account of the chronicity of the disease the employment of expensive drugs, or any drugs at all for the matter of that, is a matter of serious consideration to persons of limited means, it is often necessary to use the cheapest preparations. For this purpose common salt, two drachms in half a pint of water, or chlorate of potassium one drachm, or liq. potass. perm. one drachm in same amount of water will be found very useful.

My mode of treatment is first to soften and loosen the crusts as much as possible with a simple saline spray. For this purpose I usually employ bicarbonate of sodium, chloride of sodium borax, of each thirty grains, white sugar, forty-fives grains in half a pint of warm water. This is practically the formula introduced by Morell Mackenzie. If on rhinoscopic examination hardened masses still adhere to the mucuos membrane they may be cautiously removed by means of the nasal forceps, or by the use of the anterior or posterior nasal syringe. The patient should be told to use the spray at least night and morning, sometimes three times a day may be necessary, and to come again in a week's time. If on the second interview the nostrils are found to be free from crusts and fairly sweet, the patient is to be directed to continue the same treatment. If crusts are again met with they should be removed as on the first occassion. The simple saline spray may be continued for some weeks, and if there is no evidence of distinct improvement it will be well to make a change. I have found the addition of listerine to the alkaline spray useful in diminishing the fœtor from the nose and acting as a mild stimulant. If a more powerful disinfectant is required Dobell's solution may be used, and the amount of carbolic acid increased if necessary, also weak solutions 2 to 5 grains of sulphate of zinc, alum, or nitrate of silver will at times be found useful. The permanganate of potassium formula or creolin 1 to 500 up to 1 to 100 is useful as a change. After thorough cleansing of the nostrils insufflation may be employed. For this purpose I have used iodoform, idol. or boric acid. Recently aristol (the iodide of thymol) has been highly recommend. Many other combinations have been advised, but whatever is used it must be distinctly understood that it is not so much the particular solution employed as the thoroughness with which the process of cleansing the nostrils is carried out which conduces to the cure. Again, it is very desirable to ring the changes on the solutions employed. After thoroughly spraying out the nasal cavities I have found smearing the interior with oil of eucalyptus and vaseline (a drachm to the ounce) servicable, as it as it appears to prevent the mucous membrane from becoming dry. The vaseline should be warmed and applied by means of a camel's hair brush. Another plan is to spray out the nostrils with one of the liquid paraffins, *e. g.*, paroleine.

In intractable cases Gottstein's tampon is very useful. To obtain the best effect the plug of cotton wool should be in contact with the whole of the interior of the nostril. The plug acts as a stimulant to the mucous membrane and so keeps up a certain amount of water discharge, thereby preventing the formation of crusts.

Ruault recommends the following method of treatment:—

The nostrils are to be washed out with a solution of bicarbonate of sodium. They

are then to be painted with naphthol-camphor, which consists of one part of naphthol to two of camphor with a variable quantity of fluid vaseline according to the sensitiveness of the patient. The drying of the mucous membrane is prevented by frequently spraying the nostrils with fluid vaseline with the addition of naphthol-camphor (1 to 10,000 up to 1,000). Later on, to replace washing out by means of inhalation of vapor benzoini.

Resorcin, the galvanic cautery, the constant current, and innumerable other plans of treatment have been suggested; the very number of drugs recommended being a proof that no one of the number can claim to be a specific. I have, however, I think sufficiently described the best plans of treatment in vogue, and I need only add that I shall be extremely thankful for some new hints for combatting this troublesome affection.

MEDICINE.

A CASE OF ANGINA LUDOVICI.

Dr. T. Arnallt Jones, in the *Lancet*, says: A man aged fifty years was seized early in the morning with a severe prolonged rigor, dysphagia, and great pain in the mouth and submaxillary region. I first saw him at 9 A. M. His temperature then was 105° F.; pulse 150; respiration noisy, due to swelling up of tissues about the laryngeal orifice; headache, prostration, and covered with cold sweat. On looking into the mouth the tongue was seen pressed up against the palate by the swollen sublingual tissues; and so considerable and firm was this sublingual cellulitis that a spatula could only with difficulty be passed between the tongue and palate; depressing the tongue was quite out of the question, consequently the fauces could not be inspected. The patient could neither swallow nor speak, and it is surprising how he was able even to breathe as well as he did. There was albuminuria to the extent of one-sixth. The sublingual tissues were scarified, and leeches applied below the jaw. Poultices and steam inhalations were ordered. These measures relieved the pain somewhat, and in the evening the temperature fell to 103°, but the dysphagia and dyspnœa continued. The following morning the temperature was 104°. Submaxillary œdema increased, with commencing redness of the skin, and cellulitis was spreading down the neck between the sterno-mastoids. The patient was feebler, and the dyspnœa greater. To relieve tension and drain the tissues two deep incisions were made in the middle line of the neck—one an inch long above the hyoid bone, which reached well down to the floor of the mouth; the second, two inches long, over the cricoid cartilage and thyroid isthmus. The tissues cut through were swollen and sodden, and foul, serous blood-stained fluid poured out from both. These incisions gave marked and speedy relief, and the patient was very shortly able to swallow and speak distinctly. Hot fomentations of tenax were applied, and quinine and aconite administered. Evening temperature 101°; great relief. Brandy mixture ordered.—Third day, 9 A. M.: Temperature 100°; not quite so well. 1 P. M.: Temperature 104°; swelling and redness over upper part of sternum; leeches and poultices applied. 11 P. M.: Temperature 101°; swelling over the sternum disappeared; feels much better.—Fourth day: Temperature 100°; much improved; wounds discharging.—Fifth day: The patient up and about; feels much better, but very weak. From this to the seventeenth day the patient improved, the incisions healed, and he became practically well. Angina Ludovici is attended by a considerable mortality, and is fortunately not of common occurrence. The relief and arrest of symptoms afforded by the incisions and leeching were so marked that they should form the essence of treatment in this disease, and to be of service incisions must be made early in the case. It is too late to cut when the tissues of the neck are sloughing and the cellulitis is spreading down to the chest and the patient showing signs of profound blood-poisoning. There was no local condition, such as a carious tooth or ulcer of the mouth or pharynx, to account for the onset of the angina; but the patient's occupation, that of a butcher, suggested the possibility of his having absorbed or been inoculated with some animal or specific poison.

UNUSUAL COMPLICATIONS OF ENTERIC FEVER.

Finlayson, in the *Amer. Jour. of Med. Sciences*, gives instances of nine unusual complications of typhoid fever.

1. Abortive attacks not free from danger. In an epidemic of enteric fever in the Glasgow Western Infirmary, several of the inmates had slight febrile attacks lasting a few days and ending in recovery. One patient had an attack in which the fever lasted but

two days; fifteen days after the cessation of fever she had a relapse, which proved fatal in four weeks.

2. Carbuncle and death following an obscure illness, with little or no pyrexia. A gentleman, in whose house typhoid fever occurred, was ill and out of sorts for two weeks; his temperature never rose above 99°; this was followed by a carbuncle, which caused death from septicæmia.

3. Uræmic convulsions. A case of supposed typhoid fever, with highly albuminous urine, which contained hyaline and granular casts, was seized with convulsions, evidently uræmic, and died on the seventeenth day.

4. Grangrene of the sole of the foot. One month after the fever began in this case, a gangrenous spot appeared on the sole of the foot, where there was no pressure; the case developed cystitis, and died in the sixth week.

5. Alarming nervous disturbance with the subsidence of pyrexia. A case with relapse ran a course of four weeks; there were but few nervous symptoms; but as the fever declined, delirium set in, low and muttering, with terrible visions; a peculiar tremor of the head and complete sleeplessness also occurred.

6. Double periostitis with necrosis. A case with relapse lasted five weeks; over two weeks after defervescence, there was sudden elevation of temperature, with pain in both tibias; necrosis followed, and the patient was under treatment at the end of the eighth month.

7. Gangrene of the lung. Consolidation of the base of one lung took place in the fourth week of the fever, which was followed by gangrene of the lung. Death occurred in the eighth week.

8. Paralysis and anæsthesia of the limbs after recovery. Three weeks after recovery from typhoid fever, numbness and stiffness of the legs supervened, followed by weakness of the arms. Great wasting of the muscles occurred; there was complete inability to stand. Recovery took place under treatment with tonics and electricity.

9. Concurrent development of enteric fever and tubercular meningitis. A young man was taken suddenly ill, with symptoms of meningitis; the meningeal symptoms cleared up and the case ran a course of typical typhoid fever. During the course of the fever peculiar urinary symptoms arose; fever subsided, but progressive emaciation occurred, and signs of meningitis again appeared. He died of meningitis in about one month from the beginning of his illness. The *post-mortem* showed typical tubercular meningitis, and partially healed ulcers of Pyer's patches, which were distinctly *not* tuberculous.—*Univ. Med. Mag.*

HEMIOPIC HALLUCINATIONS.

With reference to the paper on this subject recently published by Dr. Peterson of New York, of which a notice appeared in our columns, Dr. Schweinitz in the *New York Medical Journal* refers to a case published by him as one of a series in 1887 in the *Journal of Nervous and Mental Diseases.* The patient was a young man of twenty-nine, who had several convulsions and was the subject of optic neuritis with left homonymous hemianopsia. He became mentally deranged and was sent to an asylum. Preceding the onset of hemianopsia he had visions of chairs, tables, and other common things floating about. Although he was quite rational at the time, he was unable to state whether those visions disappeared coincidently with the onset of the hemianopsia or persisted for a time. He died afterwards in the asylum, and at the necropsy there was found a gummatous infiltration at the base of the brain pressing on the right optic tract. The author is unable to state definitely that there was no affection of the occipital lobe, and he regards the case as one of the class described by Dr. Peterson in which the hemiopic hallucinations are simple and transitory.—*Lancet.*

TEMPERATURE IN EPILEPSY.

M. Bourneville (*Revue de Médecine*, April, 1891) considers the subject of temperature in epilepsy under the following heads:—(1) During the epileptic attack isolated epileptic fits cause the temperature to rise from $\frac{1}{10}$° to 1½° C.; (2) in a series of fits with intervals more or less long, during which consciousness always returns, the temperature behaves as in the first group—between this class of case and the status epilepticus there are intermediate conditions; (3) during the status epilepticus, characterized as it is by (*a*) an incessant repetition of the fits, so that often one fit begins before the other ends; (*b*) a stupor varying in degree, but which may end in absolute coma with no return of consciousness; (*c*) a hemiplegia more or less complete and transient; (*d*) frequency of the pulse and respiration, and especially by (*e*) a considerable rise of temperature persisting between the fits. M. Bourneville divides the epileptic state into two periods (1) con-

vulsive, (2) meningitic (*période méningitique*). After the temperature has risen considerably, corresponding to the convulsive stage, matters improve and the temperature falls. Then appears this meningitic stage, which may terminate in death or recovery. The status epilepticus does not always establish itself at once, and this is especially the case in partial epilepsy. The internal or central temperature (for example, in the rectum) was taken in all these cases. M. Bourneville gives many examples illustrating these views.—*Brit. Med. Jour.*

THE PREVENTION OF PHTHISIS.

The high rate of mortality from phthisis induced the State Board of Health of New Hampshire to secure the opinion of the physicians of the State upon certain points in connection with the disease, such as its cause, frequency, preventability, treatment, etc. To this end blanks were sent to all physicians of the State asking them to answer nineteen stated questions. The returns were exceedingly complete, and as reported in the recently issued annual report of the State Board of Health, make interesting reading. A summary is almost impossible but the Board presents the following:

The chief causes and the preventative measures to be employed in the disease may be summarized, in the light of our present knowledge of the disease, as follows:

1. Pulmonary phthsis is the most fatal disease known to civilization.

2. The *bacillus tuberculosis* is generally believed to be the cause of the disease.

3. The disease, when developed after the first years of childhood, is acquired and not inherited, although there may be an inherited predisposition which renders the subject incapable of resisting the invasion of the bacilli.

4. The disease is liable to appear at any period of life.

5. That there is great danger arising from the use of tuberculous meat and milk. From the evidence which has been gathered we are led to believe the liability to infection from these sources is very great and to insure public protection in this particular the State should exercise a careful supervision of our milk and meat supplies.

6. That the greatest danger of infection is from the sputa of the consumptive. For this reason, when confined to the house, a spit-cup or spittoon should be used, and when upon the street a handkerchief to receive the expectorations. The spit-cup or spittoon might perferably contain a disinfectant, but if these vessels are frequently and thoroughly cleansed with boiling water, disinfectants are not an absolute necessity. The handkerchiefs should be immersed in boiling water at least once daily before the sputum has become dried.

7. No person should occupy a sleeping room with another who has tuberculosis, although many persons escape infection under such conditions.

8. The eating utensils of a consumptive should be washed in boiling water, and care should be exercised that the same glasses, spoons, etc., are not, before being washed, used by children and others. The patient should avoid kissing others or placing in his mouth any article likely to be used or handled by others.

9. The dejections of consumptive patients in cases where the bowels are affected should be thoroughly disinfected.

10. Perfect cleanliness of the apartments occupied by consumptives should be urged in all cases. The bed-linen, towels, etc., should be very frequently put through the operations of the laundry, while the walls should be frequently cleansed and dressed anew. In fact the whole question of restriction may be expressed in one word "cleanliness."

SURGERY.

CONSERVATIVE SURGERY OF THE GALL BLADDER.

Prof. E. Rose, of Berlin, writes: The principles which should actuate us in the treatment of affections of the gall bladder are laid down by the author as follows:

Cholecystectomy (extirpation of the gall bladder) need not, as a rule, be resorted to, except in cases of malignant or complete degeneration. It may be replaced by local treatment of the gall bladder, and measures calculated to restore the outflow of bile into the cystic duct.

Another reason against the utility of extirpation, is the possibility that the occlusion of the cystic duct may be followed by dilatation of the biliary passages.

Cholecystotomy with immediate suture and closure of the abdominal wound, is capable of affecting a cure in from two to three weeks, without dangerous complications, as is shown by the author's experience.

In chronic supuration of the gall bladder, with occlusion of its efferent duct, obliteration of the organ can sometimes replace an extirpation.

Cholecystostomy, or the establishment of a biliary fistulæ, is a palliative operation, and is of especial value, when neither extirpation nor removal of the obstruction in the cystic duct is possible. It is not a radical operation, for, owing to the loss of bile, these fistulæ rapidly produce exhaustion.

Biliary fistulæ sometimes heal spontaneously without apparent cause and sometimes after removal of the cause.

In appropriate cases we are warranted in opening the gall bladder, and for that purpose even perform a laparotomy and search for, and, if possible, remove the obstruction in the gall bladder.

We can best inform ourselves regarding the condition of the gall bladder and the permeability of the bile passages by digital exploration and catheterization of the ducts.

After the obstruction has been removed, if the gall bladder is healthy, it may be immediately sutured and returned to the abdominal cavity; or if this is prevented by adhesions, we may establish a safety valve by the formation of a biliary fistulæ which is allowed to close gradually.

It is only when the cystic duct is permanently closed that we have to decide between obliteration, extirpation or cholecystostomy. —*Deutsche Zeitschrift fuer Chirurgie.*

THE SURGICAL TREATMENT OF NEUROSES.

Little by little gynæcologists are gaining courage and endeavoring to extend the scope of their favorite operation, that of the removal of the uterine appendages. Not content with the rich harvest of ovaries afforded by uterine myomata and chronic inflammatory affections of the annexes, they yearn to emasculate—or rather effeminate—women whose only offence is that of being unnecessarily irascible during the menstrual period. They loudly proclaim their intention of proceeding with the utmost caution, and well they may, for the result so far has not been very encouraging in spite of the one or two apparent successes recorded by the Napoleon of ovarian surgery. The consensus of opinion, on the part of psychologists and gynæcologists alike, is distinctly adverse to the idea that any benefit is likely to be derived from the operation in the majority of cases of insanity in females, even when the condition is exasperated by the menstrual function. There is, of course, this to be said, that no harm is done even in case of failure, because it is to the interest of the community that these women should not procreate, but neither public nor professional opinion is as yet prepared to admit this argument to possess even a negative value. Another point is, that a speculative operation of this kind would not justify incurring even the smallest risk to life. Fortunately, we are assured by Mr. Mayo Robson, that so far as the mortality of the operation is concerned, it may be treated as a *quantité négligeable.* It is hardly safe to be too dogmatic in refusing recognition to the operation when practised for the relief of mental conditions assumed to be more or less intimately associated with menstrual excitement. Professional opinion has undergone such a radical change during the last few years in respect to this branch of surgery that the prophet's role is an uncomfortable one, and is, moreover, one which we are by no means anxious to assume.—*Med. Press.*

PRIMARY RESECTION OF GANGRENOUS INTESTINE IN HERNOITOMY.

In the *Beitrage zur klinischen Chirurgie,* Bd. 7, Hft. i, Dr. F. Krumm, of Heidelberg, discusses the indications and contra-indications of primary resection with apposition of the divided portions of intestine by circular suture in cases of gangrenous hernia. The question has been much discussed since the adoption of antiseptic methods into practical surgery, and with many German surgeons of great authority it is still a disputed point whether such treatment be justifiable or not. The views expressed in this paper are based on a study of fifteen cases of gangrenous hernia, which were treated in Professor Czerny's clinic in the course of a period of nearly twelve years. In nine of these cases an artificial anus was established, and in four the gangrenous intestine was cut away and the divided portions of the intestinal canal were brought together by circular rows of sutures. The first mentioned plan of treatment resulted in complete recovery in five cases, and was attended by fatal results in the other four. Of the cases of primary resection, three were successful, in the fourth case death, which occurred on the operating table, was due to asphyxia. Dr. Krumm points out that the surgeon, in dealing with gangrenous hernia, has to decide between one or other of these two operations. The fact that in fifteen cases of gangrene of intestine in connection with strangulated hernia Czerny, who is an advocate of primary resection and circular suture, had recourse to the formation of artificial anus affords a proof that in many instances of this compli-

cation there can be no room for choice between the two methods. The latter operation alone is indicated under the following circumstances: Gangrene involving not only the strangulated intestine, but also the sac and the surrounding structures; when the patient is in a condition of extreme collapse; when the strangulation has been much prolonged and has caused severe symptoms and a large accumulation of fæcal matter in the intestinal canal. With regard to primary resection, Dr. Krumm holds that recourse to this method is justifiable in recent cases of strangulated hernia, especially cases of so-called elastic strangulation of intestine, in which the tendency to gangrene is due to congestion of the blood vessels of the strangulated loop, and not to accumulation of fæcal matter, provided also the mesentery be not too much and too extensively constricted. Cases of fæcal strangulation are not altogether excluded, but here, it is held, much judgment is required and a careful selection must be made. In such cases primary resection is not to be taken into consideration unless the strangulation has been of brief duration and the symptoms of intestinal obstruction are very severe. Exhaustion and collapse, and well-marked symptoms of peritonitis, are decisive contra-indications to such treatment. It is also contra-indicated in cases of advanced phlegmon of the structures surrounding the hernial sac and of the anterior wall of the abdomen. In such cases an artificial anus is already in process of development, and firm adhesions are probably already well established between the intestine and the hernial rings. Moreover, in such instances perfect asepsis cannot be attained. On the other hand, partial gangrene of the normal sac is not a contra-indication, since by removal of all the gangrenous parts and by energetic disinfection after provisional occlusion of the abdominal cavity a fairly aseptic field of operation may be produced. As primary section demands, as conditions of its successful performance, not only an experienced operator but also skilled assistance and a very strict attention to all the details of the antiseptic method, it ought as a rule, Dr. Krumm suggests, to be restricted to Hospital practice. Notwithstanding the many contra-indications which are carefully and candidly discussed in this paper, there still exists, it is stated, a certain class of gangrenous hernia in which primary resection of intestine and circular suture may be regarded as the proper method of treatment. With regard to the comparative mortality of the two methods of dealing with gangrenous hernia, it is pointed out by Dr. Krumm that the most recent and complete statistics show that the percentage of deaths is rather smaller after primary resection than after the formation of an artificial anus.—*Brit. Med. Jour.*

GYNÆCOLOGY.

MINOR UTERINE SURGERY.

The Uterine Sound.—On the whole, it had been better for womankind had this instrument never been invented. For the application of the electric current it has its uses, and in an occasional case where one is uncertain as to the connection of the uterus with a given tumor it may possibly give some definite information. For the purpose of measuring the depth of the uterine cavity, or for locating the position of the fundus, as it is generally used, it is absolutely superfluous. Any one who is forced to use it for these purposes, unless it be in rarely exceptional cases must confess to himself his lack of even an ordinary amount of manual dexterity. For replacing a displaced womb it is a dangerous instrument, and its use is very painful. A movable uterus can be invariably replaced by bimanual manipulation, with the patient on the back, or in the knee-chest position, with the aid of a tenaculum and a repositor. If the organ is adherent it no longer comes under the head of simple uterine disease, and should then be dealt with by other and safer procedures. The uterine sound may be used with perfect safety in careful hands; but, as ordinarily employed, it is capable of causing considerable traumatism, and of carrying septic material into the uterine cavity.

Dilitation.—This operation is one which has been much abused. It is capable of much good or much harm, depending upon whether it is used carefully and in suitable cases or not. Personally I have never had any permanent bad results follow its use. On the contrary, I have seen severe dysmenorrhœa relieved and even permanently cured; in not a small proportion of cases have I observed pregnancy follow dilatation. Patients have come to me suffering from a pelvic inflammation following a dilatation performed by others, but everything pointed to the fact that the pelvic disease had existed first and that the operation had been performed probably under a mistaken diagnosis for the relief of symptoms produced by the diseased appendages. In but one case have I had an inflammatory attack follow this operation when there was no complicating

disease. In that case I made an incomplete dilatation without ether upon the dispensary table, in a young woman, married for 5 years and sterile. The inflammatory attack cleared up within a week, she soon conceived, and a month ago I delivered her safely of a large, healthy baby. She made a perfect and uncomplicated recovery. I should be exceedingly loath to discard the dilators from my armamentariun, and can only attribute serious accidents following their use to a wrong diagnosis or a faulty use of the instrument.

Intra-uterine Medication.—There is undoubtedly a limited field for the application of drugs to the uterine cavity. It should not be forgotten, however, that it is often only supplementary to other treatment. It is just as rational to expect results from local applications to the uterine mucous membrane, as from applications to the mucous membrane of the nose and throat. The fault here is much the same as in other minor operations —either a wrong diagnosis is made, or local applications are used to the exclusion of other and probably better methods of treatment, or they have been injudiciously and rudely applied. Certainly in chronic endometritis we may expect some good from them, especially after the application of the curette.

The Curette.—This instrument, in properly selected cases, is invaluable. In my own hands the dull curette has proven worthless, and I much prefer a sharp one. Of course, the instrument is capable of harm, but so is every other that is used in surgery. If even ordinary precautions are taken in selecting cases and manipulating the curette, no damage will follow its application. For affections of the endometrium following labor, or of a fungoid character, it is exceedingly useful; I know of nothing which will take its place. In removal of retained clots, etc., in the puerperium, the finger will be found to be more certain.

Operations on the Cervix.—The splitting up of the cervix for dysmenorrhœa and sterility has fallen into deserved disuse; all that can be accomplished in that direction can be done with the dilators.

Emmett's operation for the closure of lacerated crevix should meet much the same fate, at least in the vast majority of cases. The only excuse for the number of such operations which are being continually performed is a fear of subsequent cancer. A simple, uncomplicated cervical tear causes no more trouble or inconvenience to the patient than does a woman's ear which has been torn through by her earring. The ear would be repaired for cosmetic effects; the cervix is hidden from view, and that factor would not come into consideration. Most women have lacerations of the cervix of a more or less degree. If the lips are thickened, everted and eroded, they will need treatment. Oftentimes simple scarification, followed by the application of iodine and glycerin tampons, will reduce this condition and leave a clean, healthy tear—one which will remain so until the end of time. If the lips cannot be brought into a healthy condition, or if the uterus is subinvoluted and the endomentrium diseased, the case may resolve itself into an operative one; but even here a trial with electricity will often disappoint the surgeon. In my practice it is rare to see a a lacerated cervix which calls for surgical repair. Cases which come to me from other men, who have advised an operation, get well without it. Oftentimes the symptoms for which the operation was proposed were found to be due, not to the torn cervix at all, but to other troubles, principally constitutional.

It is the easiest thing in the world to relight a pelvic inflammation whilst repairing a cervix, and I have seen this result follow such practice only too often.

Taking it all in all, I decidedly approve of minor uterine surgery in the field to which it is applicable. but it must be borne in mind that this field is a limited one, and one which becomes more and more narrow as our diagnostic resources increase.—*Dr. J. M. Baldy, in the Medical News.*

GRAVES'S DISEASE RELIEVED BY REMOVAL OF SLOUGHING FIBROID.

Dr. Carl Wettergreen (*Centralb. f. Gynäk.*, February 28th, 1891; *Eira*, No. 11, 1890, p. 334) describes a case in which a woman, aged 47, suffered for over two years from a bleeding fibroid as well as from Graves's disease. The anæmia was extreme, apparently secondary to the hæmorrhage, and of the pernicious type. Therapeutic measures were tried for a time with no effect, except that the fibroid was delivered through the os and cut awuy with Siebold's scissors. It was bigger than a man's fist, submucous, and in parts gangrenous. After the operation the hæmorrhage ceased. The patient became much stronger; the protrusion of the eyeballs and the rapid pulse and palpitations abated to a marked degree.—*Brit. Med. Jour.*

THE NATURE OF HÆMATOSALPINX.

Dr. H. Walter (*Inaugural Thesis*, Giessen, 1890) strongly contests the now prevalent doctrine that hæmatosalpinx almost necessarily implies tubal gestation in a very early stage. He made a series of sections from two cases operated upon at Giessen, and examined them very carefully under the microscope. There was no distinct evidence of tubal pregnancy. He found structures which bore a certain resemblance to chorionic villi. He believed that they were shreds of structureless membrane with dark borders—mere fragments of fibrin in fact. Dr. Walter—in opposition to Orthmann—holds that tubal gestation cannot be diagnosed with certainty, unless at least decidua cells are present. He admits that, in his cases, the etiology was negative, yet by comparison the history and clinical course of the cases with the microscopic appearances of the sections of the tubes, he feels constrained to insist that the true nature of the disease was hæmorrhage into the tubal canal as a result of catarrhal inflamation of the tube. Hæmatosalpinx may involve grave results, but it does not follow even then that the original cause is tubal pregnancy.—*Brit. Med. Jour.*

OBSTETRICS.

PLACENTA PRÆVIA.

Braxton Hicks (*L' Union Med.*) lays down the following rules as regards treatment:

1. The diagnosis of placenta prævia once established you must terminate labor with the least possible delay.

2. When the operation has been commenced you must not leave your patient until it is completed.

3. When the cervix is completely dilated and the placenta is marginal, it is necessary to break the membranes, and see whether the head is pushed toward the neck during the pains.

4. If the head descends slowly, employ the forceps or perform version.

5. If the os is small and is more or less covered by the placenta, the latter should be cautiously detached around the whole circumference of the os. If there is no hæmorrhage, delay of one or two hours is permissible. If the os is not dilated and if you have no dilator at hand, you may dilate the cervix manually. If you think that the forceps may be easily applied, it is well to apply them. If not, it is necessary to do bi-polar version by the combined internal and external method. The cervix is thus tamponed by the legs or breech of the child. After this the treatment is the same as for any case of foot or breech presentation.

6. If the neck is small, and if you have neither forceps nor dilator, version must be done.

7. If during the manoeuvers here mentioned, a violent hæmorrhage occurs, version must be terminated by extraction of the fœtus.

8. When the fœtus is dead, or when labor comes on before the end of the seventh month, it is necessary to do version and leave the rest to nature.—*Archives of Gyn.*

UNIQUE CASE OF CÆSAREAN SECTION.

Dr. Chas. P. Noble reports in the *Amer. Jour. Obstet.* an exceptionally interesting case of cæsarian section.

On the 27th of April, 1890, he was called to see Mrs. J., the messenger stating that she was in labor, the water having come away. He found her a vigorous little woman, 27 years of age, fifty-five inches in height. She was in the ninth lunar month of her sixth pregnancy. The first four pregnancies ended in miscarriages. The fifth pregnancy was terminated by Cæsarean section, done by Dr. Howard A. Kelly, April 17th, 1888. During this labor Mrs. J. was successively in the hands of a midwife, a physician, and two physicians in consultation. The grave nature of the case was not recognized, and the attendants waited for two weeks for the cervix to dilate. At the end of two weeks Dr. Kelly saw her in consultation. The pelvis was found choked with inflammatory exudate, which made an absolute barrier to delivery *per vias naturales*. Cæsarean section was done, as affording the only hope to the patient for life. At the time she was profoundly prostrated, with a pulse of 142. A feeble, jaundiced infant was delivered, which lived a week. As a result of the conditions present at the time of the operation, the uterine wound became infected; circumscribed peritonitis, with adhesion of the womb to the abdominal wall, resulted, and later a breaking down in the line of union in the abdominal wall and uterus occurred, and thus a utero-abdominal fistula formed through which the uterine contents discharged externally. The cervix broke down, and half of it came away in a slough. The patient had a narrow escape, but recovered. The fistula never healed soundly; at times it would heal, only to break down at a

menstrual period to allow of the escape of some of the menstrual blood. The patient's general condition became good, and the pregnancy resulted which is the subject of this communication.

On examination Dr. Noble found that the membranes had ruptured, and that the waters were coming away through the ventral fistula, which was dilating under the influence of the feeble pains which were present. The cervix was scarcely at all dilated, and the os could be felt surrounded by cicatricial tissue left from inflammatory processes attending the preceding labor. It seemed plain, from the condition of the soft parts alone, that, were spontaneous labor possible, the child would be delivered through the ventral fistula and not through the vagina. The scar from the former Cæsarean section was found quite stretched out by the intra-abdominal pressure. The recti muscles were separated about one inch. The fistula was situated about midway between the pubes and the umbilicus. Projecting through the fistula a process of amnion was plainly seen. The child lay in the third position. The head was quite movable above the superior strait. The fœtal heart tones were easily heard, showing that the fœtus was alive, though it evidently was quite small and immature. The soft parts of the pelvic outlet were those of a nullipara. The cervix formed the centre of a mass of scar tissue. The lateral pelvic walls were easily palpated; but, owing to the scar tissue back of the cervix, it was difficult to reach the sacrum.

The pelvic measurements were as follows: A. S. S., twenty centimetres; Cr. I., twenty-five centimetres; D. B., fifteen centimetres. The conjugate diameter cannot be taken, owing to the fixation of the cervix.

The technical details of the operation were unique. Dr. Noble's index finger was inserted through the fistula into the uterus, and upon this as a guide he incised the uterus and abdominal wall above and below the fistula with the knife and scissors as far as the region of utero-abdominal adhesion. Sufficient room not being afforded, the peritoneal cavity was opened and the uterine incision prolonged upward; a leg of the fetus was now seized and the fetus turned and delivered. It was feeble and immature (thirty-third week), and lived only a few hours.

The placenta and membranes were found strongly adherent, and it required some time to remove them. In the meanwhile hæmorrhage was quite free and could not be controlled in the usual way, by the assistant grasping and compressing the cervical region, because of the intra-abdominal fixation. Dr. Noble quickly inverted the uterus through the operation wound, which enabled the assistant to grasp the lower uterine segment and control the bleeding, while he peeled off the secundines. The finger was now passed through the crevix to provide a vent for the lochia. The walls of the fistula were exsected, and the uterine incision closed by fifteen deep and seven superficial stitches. Some of the deep stitches passed through both uterine and abdominal walls, through the region of uterine adhesion. The fact accounts for the small number of superficial stitches used. The uterine wound was closed in twenty-nine minutes. The peritoneal cavity was now cleansed and the remaining sutures introduced. The patient was put to bed without shock. The convalescence was rapid and uninterrupted. Primary union of the operation wound was obtained; and, although a number of the buried uterine sutures have been discharged, the fistula has not re-formed.

Several features of this case make it of more than ordinary interest: The operation being unique, both in its indication and in its technique.

The case is of further interest from the fact that Mrs. J. is the second woman in Philadelphia to recover from the Cæsarean operation; curiously enough, the subject of the first Cæsarean section in this city also had two operations and likewise recovered from both, the operations being done in 1835 and 1837.

Practically, the most striking feature in the case is the difference in the convalescence after the two operations—the first done late, under desperate circumstances; the second done early, when the woman was in good condition. It is but another illustration of the folly and hazard of delay, and but another argument for early diagnosis and prompt operation.

PÆDIATRICS.

FŒTAL ENDOCARDITIS.

D. Porak (*Journal de Médecine de Paris*, No. 23) reports the case of a child, which became deeply jaundiced three days after birth. The next day it was, at intervals, very cyanotic; nothing abnormal heard over the heart. The fifth day there was decided embarrassment of respiration. Disseminated areas of dullness over both lungs, with moist rales. The child died the next day.

The autopsy showed large areas of red hepatization, the lung being non-crepitant and sinking in water. The right side of the heart showed a large and patent foramen ovale. The left auricle and ventricle are small, the ventricle especially contracted: its wall is of a yellowish-white color, and covered as if with tendinous cords, adherent to the wall. The mitral valve is represented by two or three small bulbar projections. The aortic valve has disappeared, its place being taken by a rigid, perforated membranous septum, with irregular thickening. The aortic orifice, as also the lumen of the aorta, is much smaller in diameter than usual. The wall of the ventricle is thickened.

Fœtal endocarditis is not as rare as one would suppose. Haranger reports three varieties: (1) With complete obliteration of the aortic orifice; (2) with disease, but not occlusion, of the aortic valve; (3) with isolated changes at the mitral. Collateral circulation is maintained either by the foramen ovale, ductus arteriosus, or by incomplete union of the ventricular septum.—*Cin. Lancet and Clinic.*

CROUPOUS PNEUMONIA TREATED BY DIGITALIS.

After several years' trial of the various methods of treatment which have been recommended for croupous pneumonia, Prof. Petresco (*Therap. Monat.*) has arrived at the conclusion that large doses of digitalis give the best results.

He administers in the course of 24 hours an infusion made from 4 to 8 g. of digitalis leaves. This daily quantity he continues during two to four days, according to the severity of the illness. In no instance were vomiting or other toxic effects occasioned by the medicine.

The temperature, as a rule, falls from one to three degrees after a single dose, and from five to six degrees after two or three doses. At the same time the pulse is reduced by from 40 to 60. This effect on the temperature and pulse continues for about ten or twelve days, during which time the lung, as a rule, returns to its normal condition.—*Cent. f. g. Therap.*

HYGIENE.

THE PARASITE OF QUARTAN AGUE.

In the *Zeitschrift für Hygiene,* vol. x, p. 137, appears the first of a series of papers by Camillo Golgi, demonstrating by means of photography the development of the parasite found in malarious fevers. This paper deals with the amœba malariæ febris quartanæ, the form found in the quartan type. In 1880 Laveran stated that these parasites are present in every case of malaria, and in no other condition, and that they are probably the cause of the disease. His observations have been confirmed by pathologists in all parts of the world, and at the present time the weight of proof seems to be in favor of his contention. In the above paper Golgi claims to have been the first to demonstrate that the different forms described as occurring in the blood are simply modifications of one form, and, further, that these metamorphoses follow each other according to a fixed law. This development takes place within, and leads to the destruction of the red blood corpuscles. At first the amœba-like parasite is small and non-pigmented; it increases in size at the expense of the substance of the blood corpuscles, becomes pigmented, and, after passing through a series of metamorphoses, finally ends in a process of segmentation. This process of segmentation takes place at the same time as, or short time before, the onset of the febrile paroxysm, and has for its object the formation of a new generation of the parasites. The pigment granules stored up in the body of the parasite take no part in this process of segmentation, and hence, on its completion, escape into the blood plasma, where they are seized upon by the white blood corpuscles and cells of the liver, spleen, etc. The new brood of parasites at once pass into fresh red blood corpuscles, and so commences anew the cycle of metamorphoses leading up to the next paroxysm of fever. The period of time which elapses between the entrance of the parasites into the red blood corpuscles and their segmentation is exactly three days, and hence arises the periodicity of the quartan type of malarial fever. During the first and second days the parasite passes through the various phases of its development within the blood corpuscles, on the third day segmentation takes place, the new brood is set free, and fever results; in other words, the period of apyrexia corresponds with the endoglobular growth of the parasite.

Golgi states that a knowledge of these developmental stages is of immense practical importance for the purpose of diagnosis, by which an almost mathematical degree of accuracy can be arrived at, and that it is no exaggeration to say that by the simple mi-

croscopic examination of a few preparations of blood the physician is in a position to tell when the last attack of fever occurred, to foretell the time of the next attack, and further to recognize what type of malarial fever he is dealing with. The simple quartan fever is explained by Golgi as resulting from the development in the blood of one set of the parasites, which ripen every three days, while the double and triple quartan fevers are caused by the development of two and three sets respectively, coming to maturity on consecutive days. This hypothesis, of course, cannot apply to the tertian type of of malarious fever, since in this the febrile paroxysms follow each other with an interval of only one day of apyrexia intervening, instead of two days as in the case of the quartan type. Golgi is of the opinion that he has brought forward satisfactory evidence to show that tertian ague depends on the presence in the blood of a distinct variety of the malaria parasite, which passes through its developmental phases in two days instead of in three. In regard to classification, Golgi holds that the various clinical types of intermittent fever are caused by varieties of one and the same parasitic species, and that this belongs to the genius amœba. The twelve photographs which illustrate his first paper deal with the development of the parasite of quartan fever, and show, surrounded by normal red blood corpuscles, its successive metamorphoses. The photographs, which are very fine, were taken by means of Zeiss's microphotographic apparatus.—*Brit. Med. Jour.*

MEDICAL CHEMISTRY.

THE MERCURIC TEST FOR MYDRIATIC BASES.

In the *Pharmaceutical Journal* of March 8, 1884, A. W. Gerrard described a group test distinguishing atropine, hyoscyamina, daturine, and homatropine from other alkaloids. The test pointed out that the above pure bases, when gently warmed with a 5 per cent. solution of mercuric chloride in spirit and water, gave a red precipitate of mercuric oxide. Since its publication the test has been confirmed by Professor Flückiger, Dr. Schweissinger, and others. With the publication of the recent "Additions" to the British Pharmacopœia the test has appeared officially in that work in connection with hydrobromate of homatropine. The official test differs from Gerrard's by the use of a 2 per cent. solution of mercuric chloride instead of a 5 per cent. solution a difference of little moment. Quite recently the test has been criticised by P. W. and A. H. Squire in their "Supplement to the Companion to the B. P.," especially as regards hyoscyamine. These authors remark that treated in the same way as hydrobromate of homatropine, "hyoscyamine salts give the yellow precipitate which, however, does not turn red." Having but little doubt of the correctness of my former work, it was yet thought desirable to repeat my experiments. This has been done, and the results are fully confirmatory of former statements.

As the method of applying the test requires care it is as well to repeat it here. Place about $\frac{1}{10}$ grain of pure hyoscyamine, extracted from a salt by ammonia and chloroform, upon a watch glass or in a test tube, carefully add 20 minims of 2 per cent. solution of mercuric chloride in proof spirit, watching the change. At first the hyoscyamine becomes pale yellow, then darkens a little, finally heating a well marked red precipitate is formed. How the Messrs. Squire failed to obtain a like result it is difficult to understand, but either the testing or the hyoscyamine must have been at fault.

As regards hyoscine, Messrs. Squire state that it yields no mercuric oxide under the above test. This Mr. Gerrard has confirmed, so it is a character which enables us easily to distinguish hyoscine from other mydriatic bases.—*Ph. Jr. Trs.*

SIMPLE METHOD OF DIFFERENTING BUTTER AND OLEOMARGARIN.

A. R. T., St. Louis.—Please give (if there is any) a simple and ready method of telling artificial butter, hog butter, somebody has called it—from the genuine article.

As stated in a recent number of this journal, probably the easiest test, of any reliability at least, is the alcoholic solution of silver nitrate. Dissolve 25 parts of the silver nitrate in 100 parts of alcohol of 95°. Put some of this solution in a test-tube, and melt and add a portion of the material to be tested. Agitate for a few moments, and let stand. Pure butter retains its natural color, while the margarine will become a dirty brick red, the color of a mixed sample depending upon the quantity of the adulterant present therein. The test is said to be sufficiently delicate to detect 5 per cent. of margarin, while with 10 per cent. the color reaction is very strong.

Bodairy has devised a process by which the percentage of oleomargarin in adulterated

butter may be rapidly determined with an approach to exactness. It is as follows: Into a graduated test-tube of large size pour 15 ccm. of toluol. To this add 15 ccm. of the butter to be analyzed, after having melted and strained it, pour on top of the butter 50 ccm. of alcohol of 97°, shake, and place the whole in a water-bath heated 50° C. The liquid remains clear, or nearly so, if the butter be pure, while if margarin be present it first becomes turbid, and later separates into two layers, of which the upper contains the margarin. The following gives the approximate percentages of margarin ascertained by the volume of the layer:

11 ccm. of layer	10 per cent. margarin.
14 ccm. of layer	20 per cent. margarin.
19 ccm. of layer	50 per cent. margarin.
29 ccm. of layer	75 per cent. margarin.

—*Nat. Drug.*

NEWS AND MISCELLANY.

JOURNAL OF COMPARATIVE NEUROLOGY.

This Journal is a quarterly, of about 100 pages, and edited by Dr. C. L. Herick.

THE MEDICAL SOCIETY OF FRANKLIN COUNTY, PA.

The Medical Society of Franklin county, will hold its annual session July 21st, at Chambersburg. Dr. John Montgomery will deliver the address of welcome, and papers will be read by Dr. D. F. Unger, Dr. Geo. F. Hall, and Dr. I. F. Snively.

VIS MEDICATRIX.

This is the title of a new bi-monthly Journal of Medicine, human and comparative, under the editorship of Woods Hutchinson, A. M., M. D.. who has as associates L. H. Pammel, B. Agr., and S. Stewart, M. D., D. V. M. The Journal is the organ of the Iowa State Medical Society.

NEW APPOINTMENTS AT THE PHILADELPHIA POLYCLINIC.

Dr. A. R. Wharton has been elected Lecturer on Surgical Diseases of Children. Dr. Chas. P. Noble has been elected Lecturer on Gynecology; Dr. Jas. K. Young, Lecturer on Orthopædic Surgery; Dr. G. Betton Massey, Lecturer on Gynæcological Electrotherapeutics, and Dr. Lewis H. Adler, Lecturer on Diseases of the Rectum.

OHIO STATE MEDICAL SOCIETY.

The Ohio State Medical Society held its 42nd annual session at Sandusky, June 18, 19 and 20, 1891. Dr. W. J. Conklin, of Dayton presided, and Dr. G. A. Collamore, of Toledo was Secretary. More physicians were present than attended the meeting last year.

The officers for the next year are: President, Dr. G. A. Collamore, Toledo; First Vice-President, Dr. X. C. Scott, Cleveland; Second Vice-President, Dr. A. G. Gaume, Sandusky; Third Vice-President, Dr. A. R. Baker, Cleveland; Fourth Vice-President, Dr. F. D. Bain, Kenton; Secretary, Dr. T. Fitzpatrick, Cincinnati; Assistant Secretary, August Rhu, Marion; Treasurer and Librarian, Dr. T. W. Jones, Columbus. The following members of Committees were appointed for five years: Finance, H. J. Herrick, Cleveland; Legislation, D. J. Snyder, Columbus; Ethics, S. S. Thorn, Toledo; Publication, E. S. McKee, Cincinnati; Admissions, H. F. Hose, Cleveland.

Cincinnati was selected as the place of the next meeting to be held in May, 1892.

The members were entertained by an excursion to Cedar Point where the President's address was delivered and a concert given, followed by a banquet. An excursion to Put-In-Bay, Kelley's Island, Lakeside and Middle Bass was enjoyed on Friday afternoon and evening after the close of the meeting. The President's address was on Moliere and the Doctors, and consisted principally of historical material concerning Moliere and his numerous sayings concerning the medical profession.

The Committee appointed to secure the passage of a law for the protection of physicians, reported that not liking the complexion of the present Legislature, they had not essayed anything.

The subject of Contract Railroad Surgeons, referred from the American Medical Association, was brought up and referred to a committee of five. The resolution making the members of auxiliary societies, that is county and district medical societies, members of the State Medical Society, was passed after some discussion. Indiana and other States have greatly improved their membership in this way. The business of the society is to be done by delegates and all who are now members will not be affected by this change, i. e. deprived of their right of suffrage.

THE
MEDICAL AND SURGICAL REPORTER

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Clinical Lecture.

TUBERCULAR PERITONITIS — PLEURO-PNEUMONIA—OR PNEUMONIA WITH AN EXCESSIVE AMOUNT OF DRY PLEURISY.

BY L. EMMETT HOLT, M. D.,

PROFESSOR OF DISEASES OF CHILDREN AT THE NEW YORK POLYCLINIC, ETC.

Gentlemen:—This little patient whom I present to you to-day illustrates a pathological condition which is of some interest to us from a diagnostic standpoint. Her mother brings her to the clinic for diagnosis and treatment, but as she gives us no history, we are compelled to fall back on general clinical experience to solve this problem of diagnosis.

This little girl is, the mother states, four years of age, and the chief symptom that she presents is an enlargement of the abdomen. The only way by which we can reach a probable diagnosis in this case is by a process of exclusion. What then is the most frequent cause of abdominal enlargement in young children? One gentleman says rickets. Yes, we do find in rachitic children an enlargement of the abdomen, but the bones, muscles and ligaments are also affected in this disease. In this case, all these symptoms are wanting. Furthermore, this child is four years of age, and we generally see this rachitic enlargement of the abdomen between the first and second years. There is here no knock-knee, no bow-legs, or other pathological sign of rickets.

Now, what are the other causes we must look for to explain this trouble?

Another gentleman says it may be ascites or heart disease. We do not generally get ascites in Bright's disease, without dropsy of the feet. When there is an interference to the return circulation from valvular disease of the heart, we get swelling of the feet as a first symptom. That condition is not present here. The fact that dropsy begins in the abdomen and not in the feet leads us at once away from the kidney and heart as causative factors in this condition.

We would then suspect in this child abdominal rather than thoracic disease, and the liver and peritoneum would be the first organ to be scrutinized. A diagnosis is reached in any obscure case like this one only by examining carefully every organ. I have examined the patient's lungs and find nothing abnormal. Respiration is somewhat interfered with by the compression of the lungs upwards, which is due to the abdominal distention. The enlargement of the abdomen, you will observe, is very nearly symmetrical. The circumference at the umbilicus is 23¼ inches. By percussion from above downwards on the right side in the axillary line, we begin to get dullness at an inch below the level of the nipple. This dullness is probably hepatic in character, as it disappears at the free border of the ribs, and we get the normal tympanitic resonance of the intestines until a point on a level with the crest of the ilium is reached; below this point there is dullness again.

On the left side of the axillary line we begin to get dullness about two inches below the mammary line, and from this point down into the iliac fossa, there is continuous, uniform dullness, almost flatness. In the median line, the dullness begins at the umbilicus and extends to the symphysis. In the erect position then, we have an area of abdominal dullness occupying the left portion of the abdominal cavity and extending obliquely from the umbilicus to the spine of the ilium. In the recumbent position we find the area of dullness is somewhat altered. There is more resonance in the median line, in fact, all about the umbilical region, and a little more dullness in the right loin than when the patient was standing. The sense of fluctuation is very distinct in the lower portion of the abdominal cavity.

As the patient stands up, you notice an enlargement of the left abdomen, and by the sense of touch we get a feeling that somewhat resembles hernia. The assistant who sent the child to the clinic stated that he introduced a needle into the abdomen and withdrew serum. Apparently, then there is some fluid in the peritoneal cavity which has dilated the process of peritoneum away down into the abdomen and has produced here a reducible hydrocele. This is almost a demonstration of the fact that there is an accumulation of fluid in the peritoneal cavity, and there can be no doubt then that we have here an accumulation of fluid in the peritoneum.

The question now arises whether this is primary, or whether it is secondary, to some other pathological condition. It is impossible from the amount of abdominal distention present to satisfactorily palpate either the liver or the spleen.

Cirrhosis of the liver, we know, is a most frequent cause of ascites in adults. It is, however, an exceedingly rare condition in children, and has been scarcely ever observed at the age of four years. This swelling of the abdomen beginning on the left side, suggests the possibility of an ovarian cyst. This again is an extremely rare condition in childhood, and furthermore, the enlargement has been too rapid to admit of such an explanation. The presence of fluid in the region before you shows that the greater part of the distention at present is due to the accumulation of fluid in the peritoneum.

Malignant disease of the kidney as a primary condition, and peritonitis as a secondary one is a possible explanation of the symptoms here present. The urine of this patient has been examined several times and has shown neither pus, blood, nor albumen. In fact there has been nothing found that would indicate any serious renal affection. The child's condition is so good that we would hardly suspect malignant disease. The enlargement being so much greater upon one side than upon the other is about the only thing which would suggest some renal complication in this case.

Hydronephrosis is another condition which might be suspected here. There is no history, however, of renal colic and the bulging of the tumor is not so much in the lumbar region as is usually found in such cases.

We fall back then upon the primary disease of the peritoneum as, under the circumstances, perhaps, the most likely diagnosis. Tubercular peritonitis is a not uncommon disease in children of this age. It exists in two distinct forms, one the dry form in which there are plastic products binding down the intestines, together with a thickening of the omentum and tubercular deposits everywhere; the other form is associated with abdominal dropsy which may be general over the whole abdominal cavity, or may be shut in by various old adhesions as to be sacculated. This seems to be, under all circumstances, the most likely diagnosis in our patient's case this morning.

It is to be borne in mind, however, that several of the most characteristic symptoms of tubercular peritonitis are wanting. The first one is pain, second tenderness, third the presence of nodules in the abdominal cavity, and fourth the absence of temperature. It may be thought that in the absence of these signs we are hardly justifiable in making a diagnosis of tubercular peritonitis. It is to be borne in mind, however, that this disease often runs a very latent course and in many cases, the only symptom present is abdominal dropsy. The patient's temperature has been taken on several occasions, and has not been found elevated at any time. Furthermore, the other organs are free from any evidence of tubercular disease. If this were present, it would add much to the strength of our supposition.

In this connection, I wish to recall to your minds another patient with abdominal distention who was shown in the clinic about two months ago. The patient was a girl of about the same age as the child just before us, and many points in the history corresponded closely to those of this little girl. In her case, however, there was found marked tenderness over the greater part of the abdomen, five or six irregular nodules, from one to one and a half inches in diameter, chiefly in the region of the umbilicus and consolidation at the apex of the left lung. In this case the diagnosis of tubercular peritonitis was made with almost absolute certainty. The child, I have since learned, has died at home.

Most of these cases of tubercular peritonitis run a chronic, insiduous course, and unless operated upon, terminate fatally. The effects of a simple incision in those cases of the dropsical variety is sometimes marvelous and quite a considerable number of patients are now on record as having been completely cured by this means. In most of these cases the abdomen was opened under the impression that some other disease existed, and upon finding the peritoneum studded with miliary tubercles, the abdomen was simply washed out and the wound closed.

The improvement which followed this procedure was a great surprise to the physician. Laparotomy in cases of tubercular peritonitis is now considered a justifiable operation, and Dr. McCosh, of this City, recently showed at one of the societies a patient upon whom he had operated nearly a year before who at the time of operation had active pulmonary symptoms, with the physical signs of a cavity in the right lung. The abdominal symptoms entirely disappeared after the operation and the pulmonary symptoms had remained quiescent. I do not know of any successful operations of this nature as yet upon children so young as our little patient, but under the circumstances, it seems to me that an exploratory incision is justifiable and I shall recommend that the child be admitted into the hospital with this end in view.

PLEURO-PNEUMONIA, OR PNEUMONIA WITH AN EXCESSIVE AMOUNT OF DRY PLEURISY.

These specimens which I now pass around for your inspection were taken yesterday from the body of a female child eleven months old, who came into the Hospital with acute pulmonary symptoms two days before death. On admission, the temperature was 103° F. and there was great prostration, severe dyspnœa and moderate cyanosis. The respirations were frequent, up to 80 per minute, and the pulse was so rapid that it could hardly be counted. The physical signs presented were flatness over the whole left chest, with bronchial breathing, absence of vocal frenitus and voice, with friction sounds heard everywhere.

The heart was not apparently displaced, although the apex beat could not be certainly located. A hypodermic needle was inserted under the supposition that there might be effusion into the chest, but only a few drops of serum were obtained. The child sunk gradually and died of exhaustion about 24 hours after admission into the Hospital.

At the autopsy a condition which I show you here was discovered. The left lung was completely enveloped in a thick layer of greenish-yellow fibrin, being in many places a quarter of an inch thick. This could be scraped off from the parietal pleura by the handful. Loose adhesions existed between the two layers of the pleura, and in the meshes of this fibrin were here and there a few drops of serum. One section of the lung, the lower lobe was found consolidated, with a typical broncho-pneumonia and the posterior part of the upper lobe. The pleurisy, however, enveloped the whole lung quite up to the pericardium and also to the diaphragm. The opposite lung was normal, except for some patches of congestion. In the central portion of the lower lobe of the left lung were found two or three small gangrenous areas. These were grayish in color, sharply circumscribed and soft upon the surface. There was no gangrenous odor.

The heart shows the left ventricle to be normal, the left auricle is filled with a decolorized thrombus, and the right ventricle distended with a frequently organized thrombus, which extends a considerable distance into the pulmonary artery, as large as a small pipe stem. It also extends through the tricuspid orifice. We have in this condition of the heart, probably, an explanation of these areas of gangrene. They are almost certainly due to thrombus of some of the smaller branches of the pulmonary artery in the lung. That is what I frequently found on dissection in similar cases. The other organs were essentially normal.

The cases of pneumonia, with an excessive amount of dry pleurisy are exceedingly puzzling ones at the bed side. The physical signs are such as would lead usually to the diagnosis of an effusion of pus or serum into the pleural cavity. Not infrequently a drop or two of pus may be found with an exploring needle, and even incision may be made under the supposition that we have to do with an empyema. At the operation or the autopsy, the true condition of things is revealed. The existence of friction sounds all over the chest and the absence of displacement of the heart, are the symptoms which lead us to doubt the diagnosis of effusion. So far as percussion and the other auscultatory signs are concerned, they are practically identical with those found in effusion. This excussive production of fibrin not infrequently breaks down and forms an ordinary empyema. So if the patient had lived a few days longer we might have found plenty of pus at our exploratory puncture.

COMMUNICATIONS.

INVERSION OF THE UTERUS.

BY J. M. BALDY, M. D.

PROFESSOR OF GYNÆCOLOGY, PHILADELPHIA POLYCLINIC AND COLLEGE FOR GRADUATES IN MEDICINE.

From time to time cases of inversion of the uterus are reported, but they are not of

such common occurrence as to make the report of additional ones superfluous. It is notorious how difficult it is to cure this disease and how many devices have been invented for this purpose; in spite of all efforts it still remains one of the most unsatisfactory of gynæcological affections to handle successfully.

In 1888 I was asked by Drs. Urich of Annville, and Gloninger of Lebanon, Penna. to see a woman who gave me the following history. She was 33 years old and had borne one child eight years before. The labor was somewhat tedious and forceps were applied. During her lying-in she noticed that something protruded from the vulvar orifice, but on inquiry was told by her doctor that all women were so and that it would come all right. His predictions, however, proved unavailing and as time went by the mass protruded more and more. She bled frequently and profusely; the flow was always very painful. The mass was very tender and could only be pushed back, with great difficulty. An examination showed a condition of complete inversion, complicated by complete prolapse of the uterus and its appendages. The ovaries, situated at the lowest point of the mass, were large and extremely tender; in attempting replacement it was almost impossible to avoid pressure on them. Micturition and defecation could only be accomplished by reducing the whole mass within the vagina. The woman's husband had long since deserted her on account of her condition. She herself was mentally unbalanced and altogether a pitiable object. As I was on the eve of departure from the country I turned her over to another physician who admitted her to the Hospital. One year later while on a visit to the country I was asked once more to see the patient. Subsequently on inquiry from her physician I obtained the following result of his treatment. For one week after being admitted to the Hospital she had been daily placed in the knee chest position, the whole mass had been returned into the vagina and a tampon placed to retain it in position. At the end of this time the uterus was found to have returned to its normal position. The inversion had been replaced as it were spontaneously. At this point of the treatment the woman demanded her discharge, refusing any further aid and returned home to the country. When I saw her a year afterward, there was the old condition of prolapse and a tendency of the inversion to return. I performed the Emmett operation on the anterior wall of the vagina taking in as much of the relaxed tissue as possible, and closed the perineum after the method of Emmett. Within a few months the whole mass had again prolapsed and I was asked to try once more. This time I removed the ovaries, which I found as large as walnuts, and badly diseased. In this I had a triple object: the relief of her pain, which was severe; the establishment of the menopause and the consequent prevention of the monthly congestions, each one of which caused an increase in the weight of the pelvic organs, and made the parts prolapse more and more; the drawing up of the prolapsed organs and their support from above. In placing the ligatures, care was observed to take in all the slack possible of the broad ligaments. The ligature perforated the broad ligament below the round ligament and included this organ in its grasp, in this way giving additional support to the drawn up uterus. The uterus was stitched to the abdominal walls. Like the former operations, this one proved a failure and soon the prolapse was as bad as ever. In the course of time I had an innumerable number of letters from both herself and her doctors, asking for another attempt at relief. After all this treatment she was not only suffering from the prolapse, but the uterus had again inverted. I agreed to make one more effort to cure her, provided she would come to the city and put herself unreservedly under my care. At the same time I told them that I should have to remove the uterus. I heard nothing more of the patient until within a month, when I discovered that she had gone to the almshouse in Lebanon County, where her uterus had been removed per vaginum. If I remember correctly I was told that there was still some prolapse of the vaginal walls which will probably require a plastic operation for its cure. After some eleven years of constant suffering, this poor woman deserted by her husband and family through the neglect and ignorance of her physician during her confinement, has been forced to go to the almshouse in a state of insanity.

This case presents many points of interest. The ease with which the inverted uterus was replaced is not altogether unique. Robert Barnes in the second edition of his *Diseases of Women*, and R. P. Harris in the *American Journal of Medical Sciences*, January, 1880, makes mention of spontaneous reduction of inverted uteri. Dr. Charles C. Lee (*American Journal of Obstetrics*, 1888) has reported two cases, in which reduction occurred after

a few weeks application of the vaginal tampon. The case under discussion returned to its normal position after even a shorter course of treatment than did those of Lee.

The failure to keep the uterus in its normal condition and cure the prolapse was probably due to a combination of circumstances. The woman was mentally unbalanced. She would demand an operation and just as soon as it was performed she would refuse to allow any attempt to hold what was gained by supplementary proceedures. When, however, she found that one operation had failed she would demand another and so on to the end. Could the plastic operations have been supplemented by the laparotomy, a success might have resulted; but the good effects of one operation were ruined before the other could be obtained.

One point of scientific interest I have as yet failed to mention. While the uterus was inverted, the uterine openings of the Fallopian tubes were in plain sight. I had several opportunities of observing the patient during the process of menstruation. The dark *menstrual blood all came from the tubes.* The mucous membrane of the uterus remained in the usual condition, but the flow from the tubal openings was free and had all the characteristics of the normal menstrual blood. This case would seem then to go a great way towards sustaining Tait's theory of menstruation. The fact that there was no exudation from the endometrium is not so surprising, considering how long it had been exposed to foreign influences, but the free tubal hæmorrhage is significant. I have seen cases of inversion in which the bleeding occurred all the more profusely from the endometrium, but the inversion in these cases has been of more recent occurrence and there was in one case polypoid growths at the fundus.

My experience with this disease would prevent me from ever using any of the forcible methods of replacement which are at present and have in the past been in use, and which are recommended in all the text books. If failure to reduce an inverted uterus follow firm and persistent use of the vaginal tampon, the only rational procedure is vaginal hysterectomy. Occasionally, cases are reduced by some of the many methods recommended, but most often they fail. Of these proceedures the one proposed by Aveling is the most scientific and most successful. This consists of continuous elastic pressure in the line of the axis of the pelvis. A special instrument is necessary and the operation extends at times for days. Following manual attempts at reduction, I have seen a peritonitis set up, as proven subsequently, by a laparotomy, which caused adhesion of every thing situated in the pelvis; tubes, ovaries, intestines and omentum. Even then the inversion was not reduced. I have seen the abdomen opened, a stout cord passed through the fundus into the vagina, a button attached to the vaginal end and traction made upon the cord. As an aid to this the cervix was dilated from above with dilators and at the same time efforts were made through the vagina, with the hand, to assist in the reduction, all resulting in failure. In fact I have seen a button tear through the uterus while traction was being made on the cord and the patient die in spite of the fact that the inverted fundus with the hole in it was amputated. The amount of manipulation before the amputation was too much for the woman's already reduced strength.

I consider all these methods distinctly illogical and dangerous and believe they should all be condemned in favor of the quick, safe and sure method of vaginal hysterectomy, provided that the vaginal tampon has failed after having been used as above indicated.

REPORT OF CASES.*

EMPYEMA IN A CHILD FOUR YEARS OLD—PIN IN LARYNX OF CHILD REMOVED BY ENDO-LARYNGEAL METHOD—A NON-MALIGNANT GROWTH ON VOCAL CORD SUCCESSFULLY REMOVED—DIPHTHERITIC CROUP AT THE AGE OF SIXTY YEARS.

BY F. E. WAXHAM, M. D., CHICAGO.

PROFESSOR OF DISEASES OF CHILDREN, LARYNGOLOGY AND RHINOLOGY COLLEGE OF PHYSICIANS AND SURGEONS OF CHICAGO; PROFESSOR OF LARYNGOLOGY AND RHINOLOGY POST-GRADUATE MEDICAL SCHOOL OF CHICAGO.

The first case, that of empyema in a child, is especially interesting on account of the many complications and the remarkable vitality of the patient. Among the most common causes of empyema in children are pleurisy, pneumonia and diphtheria. In this case all these causes combined to produce the disease together with very unfavorable hygienic surroundings. On May 1st of last year I was called through the courtesy of Dr. Meyeronitz to perform intubation upon a boy between three and four years of age,

*Read before the Chicago Medical Society, July 6, 1891.

and learned that he had been ill with pharyngeal diphtheria for a number of days. The child was much prostrated, the disease had invaded the larynx, respiration was difficult indeed, and death seemed inevitable. The operation was performed giving immediate relief to the urgent symptoms. After six days the boy was able to breathe without the tube and seemed in a fair way to recover.

Four weeks later I was again called and found the patient with a dangerous attack of pleuro-pneumonia. The symptoms were severe and positive. The child had not completely recovered from the effects of the diphtheria when he came down with the pneumonia. Although the dangerous symptoms subsided in the course of ten days, yet some fever continued, the cough remained troublesome, together with some dyspnœa and dullness over a considerable portion of right lung.

Upon aspirating with a hypodermic needle pus was found in the pleural cavity.

June the 29th with the assistance of Dr. Meyeronitz, a free incision was made in the axillary line in the sixth interspace, and a large amount of pus evacuated. A double drainage tube was inserted and the pleural cavity thoroughly washed with a warm saturated solution of boracic acid and antiseptic dressings applied. The amount of pus gradually diminished, but did not entirely cease, and upon careful search for the cause of the persistent discharge it was found in the presence of a necrosed rib. Although the child was greatly emaciated, there was still a fair amount of vitality and it was determined to excise the rib.

August 7th, again assisted by Dr. Meyeronitz, an anæsthetic was administered and several inches of necrosed rib removed, and antiseptic dressings applied. The child now made a speedy recovery and since has remained perfectly well.

Case II.—*Pin in the Larynx.* This case is interesting on account of the peculiar position of the pin. The case I believe to be unique, having never heard or read of a similar case.

January 1st, Dr. M. W. Bacon, of Englewood, referred this patient to me, and the following history was elicited: "Twenty-four hours previously while holding a pin in the mouth it slipped down his throat and after coughing violently for a moment a sharp pain was felt which was greatly intensified upon swallowing. The pin had fallen into the larynx head first, and when the spasmodic cough occurred, the point which was very sharp was driven upward into the epiglottis. Dr. Bacon being consulted, wisely advised the swallowing of a crust of bread; as this was done the head of the pin striking against the walls of the larynx the point was more deeply forced into the epiglottis, as the latter was pressed down by the bolus during the act of swallowing, and the pin was thus insured against accidentally dropping into the trachea.

The symptoms indicating the presence of the pin in the larynx, were a more or less frequent cough, constant pricking pain in the throat and difficult and very painful deglutition. Although but ten years old, the boy was intelligent and tractable and permitted a careful laryngoscopic examination. The pin was plainly seen with the head directed downward into the glottis, and the point firmly implanted in the tip of the epiglottis. After anæsthetizing the throat with a ten per cent. solution of cocaine, a careful attempt was made at removal. A modified Cusco's forceps was employed and guided by the mirror introduced, and the pin firmly grasped and removed at the expense of some slight injury to the epiglottis as the point of the pin tore through it. For two or three days there remained some pain, especially upon swallowing, but this soon subsided."

Case III.—*Non-malignant Growth on Vocal Cord.*—D. H., a vocal music teacher, consulted me January 22d, on account of impairment of the voice. There was not complete aphonia, and yet the voice had gradually become hoarse and husky, and now completely interfered with his occupation. Upon careful laryngoscopic examination a small reddish growth half the size of a buckshot, and with a broad base, was seen upon the right vocal cord. This growth, though not large, prevented the close approximation and normal vibration of the vocal cords. Our authorities do not generally recommend the removal of non-malignant growths unless their position or size is such as to endanger life by obstruction to respiration. Indeed some state positively that the only indication for their removal is rapid growth and dyspnœa, and strongly advise guarded instruments instead of cutting forceps when removed on account of the great danger of injury to the vocal cords and subsequent inflammation and swelling of the mucous membrane of the larynx. In this case, on account of the great hardship resulting from the loss of occupation, it seemed that we were justified in a careful attempt at removal. For reason of the small size of the growth and broad attachment, the cutting

forceps was the only instrument suitable for the removal. The throat and larynx were thoroughly anæsthetized with cocaine, the instrument warmed and passed down into the larynx guided by the mirror. He was now directed to take a deep breath and produce the prolonged sound of A in a high pitch, and as the vocal cords approximated, the growth was seized with forceps and removed. The growth upon removal was found to be a small myxo-fibroma. For a few days following the operation there was slight congestion of the right vocal band, but this soon passed away after a few applications of chloride of zinc (gr. 111 to ℥1). Three months later upon examination of the larynx both vocal cords were perfectly natural. There was not the slightest evidence of return of the growth, the patient had resumed his occupation, and the voice was clear and perfect.

Case IV.—*Diphtheritic Croup at the age of sixty years.* On April 15th, I was called, through the courtesy of Dr. A. E. Palmer, of Morris, Illinois, to see Mrs. M. B., a lady of great culture and refinement. On arriving at 11 A. M., the patient was found breathing with great difficulty; the pulse was small and very weak, and the extremities were becoming cold. Intelligence, however, was unimpaired, and she complained of a great sense of suffocation. Dr. Palmer has very kindly given me the following history;

"Mrs. B., aged 60, never had any serious illness. Had chronic pharyngitis, and at about the age of 40 had several attacks of spasmodic croup. Two weeks before last illness, she visited Braidwood, and as there had not been a case of diphtheria in Morris for many months it was thought that she may have contracted the disease there. Friday, April 10, 1891, was slightly indisposed, also April 11th. Sunday, April 12th, was very much better and unusually vivacious. Monday morning at 2, was called on account of the difficulty of breathing and found false membrane, covering a large portion of the fauces. Tuesday the membrane was less, but the breathing more difficult. Wednesday, April 15th, Dr. Palmer summoned me to his assistance to perform intubation, and the symptoms had become so urgent that there was but little time for delay. An adult tube was armed with thread and attached to the introducer. The patient was placed in a sitting position in bed and was well supported. The gag was placed between the teeth and the tube quickly introduced into the larynx. As this was done respiration was at once arrested, membrane having been pushed down in front of the tube. After waiting a moment the tube was quickly withdrawn and the expulsive cough which followed expelled a large membrane exudate which you observe is a perfect cast of the whole trachea. Respiration now became perfectly normal, the pulse improved, the color returned, and the patient expressed herself as comfortable. As there was not the slightest impediment to respiration it was decided not to re-introduce the tube."

In regard to the subsequent history, Dr. Palmer writes as follows: "There was entire relief until Thursday noon, when symptoms of pulmonary obstruction supervened and steadily increased until death occurred very easily and quietly at 4 P. M., Friday, April 17, 1891. There has not been a case of diphtheria in Morris since the death of Mrs. B."

A CASE OF GASTRALGIA CURED BY TRACHELORRAPHY.

BY ALICE McLEAN ROSS, M. D.,

RESIDENT PHYSICIAN IN THE WOMAN'S HOSPITAL AND FOUNDLING'S HOME, OF DETROIT, MICH.

May X—Delivered upon the evening of Feb. 22, of a female child weighing eight pounds. The perinæum was slightly lacerated, one silver wire suture was inserted and good union resulted. The lying-in period was marked only by the occurrence of cramp-like pains in the lower part of the abdomen, with a rise of temperature to 101° F. on the fifth day, which all subsided under the application of heat and the administration of analgesics. The child developed an eroding ulcer of the soft palate with syphilitic cacluxia, and was put upon grey powder, gr. j morning and evening.

The ulcer was touched daily with a mitigated stick of silver nitrate, and the little patient is doing fairly well. There were no active manifestations of syphilis in the mother, and never had been as far as could be learned from the history and a careful physical examination, but nevertheless, I believe that in these cases there is a mild specific poisoning which will show itself sooner or later. I always allow these mothers to nurse their children, never fearing infection of the nipple from any open lesion in the mouth. I put the mother upon small doses of corrosive sublimates, and all went well until the fifteenth day, when she was attacked with terrific gastralgia. The pains were intense, lancinating and she

said, much harder to bear than those of labor. They subsided in an hour, under large doses of morphine, and that same evening she had another paroxysm which terminated with vomiting. These continued, occurring sometimes twice, sometimes four times in the twenty-four hours. At first they generally terminated with vomiting, later they simply died away under the influence of anodynes, and hot applications. The patient's life was a misery to her, for besides the actual agony, she was constantly dreading the onset of pain. I increased the dose of mercury to the point of tolerance, but all to no purpose. Much attention was paid to diet, and the food was well masticated, but it was found that the paroxysms came on as often after eating lightly, or not at all as after a hearty meal. Pepsin and dilute hydrochloric acid were given regularly, but digestion seemed good. Bismuth sub-nitrate in thirty grain doses was tried, also the bromides, but all to no avail. The attacks continued with the same severity, but a little less frequently, and the only relief was chloral, which was found to act better than morphia, together with hot applications and blisters over the stomach. As a matter of duty, I made a thorough examination of the pelvic organs and found a small laceration of the cervix upon the left side, extending about one-half inch into the muscular tissue. It was somewhat tender to the touch, and I resolved that if all else failed, I should advise operation. After much opposition on the part of the patient trachelorraphy was performed by Dr. Walter J. Cree, Consulting Physician to the Woman's Hospital. Two silver wire sutures were inserted, and all medication was suspended, and the result was most gratifying. The patient did not have a single return of the trouble, while the stitches were in place. They were removed upon the tenth day, and union was perfect. On the eleventh day, there was a mild return of pain which was probably caused by a little irritation where the wire had been. It is now a little over a month since she has been allowed to get out of bed. She is nursing her babe, walks up and down two flights of stairs many times a day, and has only had two very mild attacks of pain, after overdoing. She is in splendid condition, and thankful that she was compelled to submit to the operation. The babe has not borne mercury very well, and I have since put the mother again on small doses of bichloride, in the hope of assisting in its medication through the milk. No bad effects have been noticable, so it could not have been the mercury, which was suspended after the operation, that caused the trouble, in the first instance.

This is one of the happy results of this operation, and illustrates the advisability of examination of uterus and appendages in all nervous troubles in women, and also of operation before the nervous system has become such a wreck that nothing short of a miracle could effect a cure.

ON THE ANTI-MALARIAL PROPERTIES OF PAMBOTANO (CALLIANDRA HOUSTONI).*

BY A. E. ROUSSEL, M. D.,

DEMONSTRATOR OF PHYSICAL DIAGNOSIS IN THE MEDICO CHIRURGICAL COLLEGE—PHYSICIAN TO THE HOWARD HOSPITAL—TO THE SOUTHWESTERN HOSPITAL, ETC.

I take pleasure in bringing to your notice a drug which has recently been the subject of considerable experimentation as regards its anti-malarial properties, but which has not as yet been tested, so far as I know, in our own country.

The pambotano, or Calliandra Houstoni (Baillon), is a small tree, growing from three to five feet high, and is found principally in Mexico, where it seems to have possessed considerable reputation for its medicinal qualities.

It was first prominently brought before the attention of the medical profession through an article of Dr. J. Valude, which was presented to the Academie de Médecine of Paris by Dr. Le Roy de Mericort, on the 19th of November, 1889, and which resulted in a report on the subject by the Academie on February 18, 1890.

In this report Dr. Dujardin-Beaumetz, although doubting the ability of this drug to replace quinine, admits of its apparent value, and suggests the necessity for further experiments in this direction. Dr. Villejean, in a chemical analysis of the plant, has, as yet been unable to isolate its active principle, but notes the presence of a peculiar tannin, which yields a dark-green precipitate with the perchloride of iron, and thus closely resembles the tannin of catechu and cinchona.

Dr. Valude uses a decoction and alcoholic elixir in doses of 70 grammes for an adult, and 35 grammes for a child under twelve years of age. One litre of this solution should be divided into four doses, and taken within

* Read before the Phila. Co. Medical Society.

the twenty-four hours, each dose to be sweetened and drank hot. His report comprises personal observations of fifteen cases of malarial fever, besides a *résumé* of the results obtained in Mexico, Japan and Italy. Of the fifteen cases in question seven were complicated by other diseases, such as la grippe, tuberculosis, grave anæmia, and in one case by intermittent dental neuralgia. In these last cases the periodical attacks were suppressed, while the results in the uncomplicated cases were uniformly successful, and in the majority of instances but one dose of pambotano was necessary to effect a cure.

The following observations are related in detail:

Case I.—Girl of sixteen years, very anæmic quotidian, fever beginning May 17, 1886, at 2 o'clock, and becoming permanent with exacerbation the following day at 2 o'clock. Continual headache, which increases at time of access. Decoction of pambotano May 22d. Vomiting at the second dose. Nausea with first dose. Cephalalgia disappeared after first dose. Since that time the fever has not returned.

Case II.—Child of twelve years; same type as above, with violent cephalalgia, which is worse at the beginning of fever, 4 or 5 o'clock in the evening. Decoction of pambotano the fourth day of the fever. Nausea and vomiting after first dose. At third dose child vomited food taken one hour before, but no medicine. Food taken twenty minutes after the last dose, was followed neither by nausea nor vomiting. The bowels were opened after the first two doses. The headache disappeared after the first. At 4 o'clock the fever did not return. Two doses alone had been absorbed. The cure was definite.

Case III.—Man of twenty-two years, suffering from intermittent fever contracted at Tonquin. Four different attacks while at Tonquin at two or three months interval (in September, December, February, April.) Returned to France in May. Return of fever in July, tertian type. Decoction of pambotano the day of the attack. Some nausea, no vomiting. After the first dose the headache disappeared. The fever did not return. Fifteen months afterward the cure was maintained, and the fever which had previously returned every two months had not reappeared.

Case IV.—Man of forty-four years. Subject to the tertian fever, two attacks of which have been treated by quinine. At the third attack decoction of pambotano. Some nausea. The fever has not returned.

Case V.—Woman, forty-eight years of age; quotidian type, commencing at noon with a violent pain on the right side. The elixir, containing 50 grammes of the root. was given on the 30th of March. Some nausea. One passage after the first dose, which caused the disappearance of the pain above-mentioned. At 1 o'clock the customary chill did not appear, but a slight elevation of temperature was noticed. On the 31st of March the fever returned to a slight extent. On the 2d of April no fever, but the appetite was poor and the tongue coated. After the 3d of April the fever no longer returned.

Case VI.—Man, forty-six years of age. First attack. Suffering for eight days from well marked attacks,with violent cephalalgia. Decoction of 70 grammes of pambotano. No bad results. At noon, the customary hour for the chill, nothing was noticed, notwithstanding that only two doses had been taken.

The following cases have also been collected by Dr. Valude:

Dr. J. M. Bandera, of the University of Mexico, after carefully testing the drug in various Hospitals, declares that he has obtained excellent results, even in cases which had not yielded to the use of quinine.

Professor J. D. Campuzano, of Tacubaya, as well as Dr. J. B. Lobato, report excellent results.

The government of Guanajuato appointed Drs. J. Hernandez, R. Lopez, and T. Dominguez to officially report on the merits of pambotano, and after careful experiments these gentlemen reported marked success.

Dr. Lafont reports having treated the Conseiller-general of French Guiana, who had suffered from a severe type of malarial fever for five years, which had resisted the use of quinine, arsenic, as well as a long sojourn at Vichy. One dose of pambotano was sufficient to effect a cure, which is maintained until the present time.

In the province of Salto, Argentine Republic, Drs. C. Coates, J. Tedin, and A. Valdez have treated numerous cases of malarial fevers, some of which were uninfluenced by the administration of quinine, but all of which yielded to the use of pambotano.

Concerning the results obtained by its use in the French and German Hospitals at Yokohama, Japan, the Belgian minister reports that in all the cases a cure resulted within forty-eight hours.

Dr. A. de Cadilhac, an Italian physician, reports the cure of a case of obstinate malarial fever contracted in the neighborhood of

Rome, which had resisted the use of strong doses of quinine.

Dr. Betances, now of Paris, reports three cases of severe malarial fever, contracted at Panama by employes of the Canal Company, which had totally resisted large doses of quinine and arsenic, as well as the douche treatment. In each case one dose of pambotano resulted in a permanent cure.

Dr. Depeton, practising in the Basses Pyrinées gives a history of three cases, with an equally successful termination.

Dr. De Chapelle, of Bordeaux, reports a case of quotidian intermittent, in a patient seventy-two years of age, where quinine at first yielded good results, but afterward lost its effect. The patient was in a desperate state when he was placed upon one day's treatment of pambotano, which resulted in a total cure.

Since the collection and publication of these statistics numerous cures have been reported by physicians in different parts of France. The results, as reported, are so uniformly successful that the question arises whether a certain allowance should not be made for the enthusiasm which so generally attends the introduction of a new remedy.

Still more recently (*La Tritum Médicale*, April 30, 1891) Dr. J. Pelletan reports the case of a man, thirty-eight years of age, who contracted repeated attacks of malarial fever of divers types while living in various parts of South America. Returning to Paris some years since the fever reluctantly yielded to the quinine treatment, but was followed by obstinate neuralgias in various parts of the body, and particularly by an atrocious sciatica, which caused the most intense suffering.

Notwithstanding the most varied forms of treatment, nothing afforded even temporary relief, except hypodermics of morphia.

The patient at this time has marked emaciated complexion of a pasty yellow with a parchment-like skin, presented a cachectic appearance, and the spleen was markedly enlarged. No history of syphilis or alcoholism.

On the 19th of January last he was ordered a dose of pambotano (Midy).

Up to the present time (April 20th) he has been entirely free from all pain, notwithstanding that he was exposed to the inclement weather of a Paris winter.

My own observations are limited to eight in number as far as the malarial fevers are concerned. Each of the above cases, however, was carefully observed for a varying period of time before the administration of the medicament in order to insure accuracy of diagnosis. I have also observed its results in other diseases, such as la grippe, typhoid fever, phthisis, etc., but, frankly speaking, no influence could be detected upon the course of these different maladies.

The preparation used in these cases was an alcoholic elixir prepared by Midy, of Paris, and kindly furnished me for the purpose by Riguad and Chapoteaut. Each bottle of the elixir contains 90 grammes, representing 70 grammes of pambotano. The contents of each bottle is to be administered in four equal portions within the twenty-four hours in hot sweetened water or tea, and preferably taken on an empty stomach.

The cases are as follows:

Case I.—A clergyman, forty years of age, contracted a quotidian intermittent while on a gunning trip in Virginia, six years ago. Since that time he has, without exception, been subject to a renewal of the attacks every spring, and occasionally in the fall of the year. These attacks yield to treatment by large doses of quinine and arsenic, but generally incapacitate him from work for a period of about two weeks. His present attack commenced with a chill on March 2, 1891, at 4 o'clock in the afternoon, followed by a temperature of 104°, and a return of the same symptoms on the succeeding day. He commenced taking the elixir of pambotano on the 4th of March, but experienced a modified chill on the afternoon of the same day; temperature 102°. Some nausea after the first dose. Since that time he has had no return of the above symptoms.

Case II.—Girl, aged seventeen years, employed in a mill, residing in the southern section of the city, presented herself at the Southwestern Dispensary with the history of having had a chill on the previous day followed by fever and sweating. Temperature at the present time normal, but patient feels weak and languid; tongue coated. She was directed to return the next day. On this occasion the thermometer marked $102\frac{2}{5}$.° She commenced the pambotano the same afternoon, taking two doses on that day, and two the day following. The first dose was vomited within fifteen minutes, but the subsequent doses were retained. She remained under further observation for ten days, with no return of the fever.

Case III.—Woman, aged thirty-seven years, dressmaker; has had attacks of quotidian intermittent in the spring of the year for the last four years, which kept her confined to the house for about ten days on each occasion. Was taken with a chill March 24th, followed by the regular symptoms,

which were again repeated the next day. Commenced the use of pambotano March 26th. Some nausea after each dose, but no vomiting. Bowels open three times during the course of the day. Resumed her occupation on the 27th, and subsequently reports (June 8, 1891) that she had been entirely well ever since.

Case IV.—Commercial traveller, aged twenty-five years. While in Florida last autumn he was taken ill with a severe type of remittent fever, which confined him to the hotel for a period of seven weeks, and which finally yielded to large doses of quinine and arsenic. Present attack commenced April 3d with chill, fever, intense headache, coated tongue, nausea, and some vomiting. Commenced the pambotano on April 4th; the patient vomited the second, third, and fourth doses. On evening of same day he was given three grains of calomel in divided doses, to be followed by a saline. On the morning of the 5th, the fever still being present, the drug was ordered continued as on the previous day, but he again vomited the first and third doses, besides which the bowels were opened at least a dozen times. On the 6th the patient appearing no better, and the irritability of the stomach still being present, he was placed on suppositories of quinine, together with the use of Fowler's solution internally. After further treatment of about a week, the patient entered into a rather slow convalescence.

Case V.—A woman of thirty-five years, with a distinct malarial history, had been under my care for over a year suffering from severe attacks of neuralgia in various parts of the body, but particularly of the facial type. Rarely a week passed without severe suffering on her part. Quinine, arsenic, antipyrin, and the general routine treatment, including electricity, had been without any permanent result; the same may be said of the extraction of several decayed teeth. Commenced taking pambotano on April 6th without suffering any inconvenience from the drug. The pains disappeared to a great extent until April 18th, when she experienced another attack, but milder in character, according to her testimony. Another dose of pambotano was administered April 19th, since which time she has been free from pain, with the exception of slight twinges occurring in damp weather.

Case VI.—Laborer, aged forty years, applied at my service at the Howard Hospital, May 2, 1891, with a tertian intermittent, the result of an attack contracted four years ago, and which has since visited him every spring and fall. Commenced pambotano the next day, since which time the fever has not returned.

Case VII.—Laborer, aged thirty-five years, applied at the Howard Hospital May 22d, with a tertian intermittent, which, he thinks, he contracted while digging at Greenwich Point. Some irritability of the stomach being manifested, small doses of calomel were ordered for that day. Commenced pambotano on the 23d, but vomited the third dose. Slight chill on morning of the 24th. Drug continued during the day, after which no further treatment was necessary.

Case VIII.—Laborer, aged thirty-two years, applied at the Howard Hospital, June 2d, with quotidian type of fever, headache, vomiting and diarrhœa. Commenced pambotano June 3d, but vomited each and every dose. Drug continued June 4th, and only the last dose was vomited, but the number of intestinal movements were greatly increased and accompanied by some griping pain. The fever not being apparently influenced, he was placed under large doses of quinine, and is now entering convalescence.

As will be seen by the above my results, although decidedly encouraging, are hardly as satisfactory as some of the reports from abroad. In the two cases where the exhibition of the drug remained apparently without result, the question may arise as to whether a sufficiently large quantity was really absorbed on account of the gastro-intestinal irritability. Indeed, this undesirable feature seems to play a more or less important part in most of the cases.

For the above reason it would seem especially desirable that an active principle should be isolated. And we can only wonder that this has not already been accomplished in a drug whose action seems to be sufficiently pronounced to obtain results within such a comparatively short period of time.

In conclusion, it would seem to me that the results already obtained are sufficient for further work in this direction, especially as no opportunities for observing malarial fevers are better than those of the French physicians.

SCURVY.

Tschelzoro considers an absolute milk diet a specific for scorbutus. He begins with about four glasses of milk a day, and increases this quantity at the rate of a glass every day or two.—*Ex.*

Special Correspondence.

London Letter.

THE GENERAL MEDICAL COUNCIL AND THE FIFTH YEAR OF MEDICAL EDUCATION—THE LIVER AND "LIVERISH" PATIENTS—HEART MURMURS—DOCTOR WILKS ON VENESECTION—BRITISH MEDICAL ASSOCIATION—SIR RICHARD QUAIN ON PERSONAL APPEARANCE AND HANDWRITING.

On meeting for the fiftieth session that important body, the General Medical Council, proceeded to elect Sir Richard Quain to the post of President, rendered vacant by death of the late Professor Marshall. A good deal of discussion took place as to the disposal of the fifth year of study, already adopted by several leading bodies, as the London College of Physicians and the University of Edinburgh. Everyone seems to agree on the necessity of devoting the additional twelve months to practical work of some kind, but there are a variety of opinions as to what branch of the curriculum should be specially favored. For a long time past attention has been called to the fact that the present provision for training in practical midwifery is a snare and a delusion, and a motion was laid before the Council proposing six months compulsory attendance at a lying-in institution. It was pointed out that the standard of professional requirements had everywhere been raised, except in that particular branch. One of the speakers, Mr. Wheelhouse, of Leeds, insisted upon the unspeakable importance of a knowledge of midwifery to the general practitioner. In the course of a long career the latter might not encounter a single surgical case of importance, but he was certain, on the other hand, sooner or later, to meet with the dangerous complications of labor. Most people will agree that a radical defect of modern medical education is its want of what the irreverent youth of the day would call "common garden" training. There is a tendency to avoid homely and everyday ailments, while students are duly impressed with a minute knowledge of such rarities as myxœdema and acromegalie. Who, as some one has most pertinently inquired, has ever, as a student heard a lecture on biliousness? Yet functional hepatic disturbances, which are simply protean in their nature, will be found to enter largely into the domain of actual practice. In surgery, again, a student is taught the different ways of ligaturing arteries, operations about the foot and ankle, and amputation through the hip-joint; but when will the ordinary practitioner be called upon to tie a large artery or to perform a major amputation? As a test of the weak-kneed nature of examination-room knowledge, it would be interesting if a round hundred or so of the leaders of the profession could be publicly put through their paces before a high standard examination body.

Of course, no one questions the value of a sound and thorough medical education. The whole matter, however, has been allowed to get too much under the control of examiners and of licensing bodies. Professional interest has now been thoroughly awakened, and it is to be hoped that the rectifying of manifold errors will be so many steps toward the attainment of a more perfect ideal.

That important organ, the liver, is now as much neglected as it was formerly set up in high places. In many large hospitals one may see diagnosis of all kinds of disease, general and special, but rarely any mention of the liver, except for such conditions as atrophic cirrhosis or obvious enlargements. This points to an unmerited degree of neglect, which is no doubt chiefly owing to a rebound from its former popularity. In the good old days the long-suffering organ in question, covered a multitude of sins, and was, indeed in many cases, a refuge for colossal ignorance. That these traditions are not altogether dead is shown by the following anecdote, the truth of which is vouched for by a student of University College. My informant went to take charge of a practice, and received the concise directions from its owner. "My patients are divided into three classes. The first have nothing the matter with them, these you will soon be able to single out. The second lot suffer from 'liver,' and those you will have no difficulty in distinguishing. The third class are made up of those who, while not suffering exactly from 'liver,' may be all brought together under the term 'liverish'." And then the worthy and hard worked practitioner—he had an extensive practice,—went far away for his annual fortnight at the seaside.

It is well known that of late years many of our ideas regarding the significance of heart murmurs have been variously altered and modified. Right-sided dilatation, for instance, is said to be quite as often shown by pulsation in the third, fourth, and fifth interspaces to the left of the sternum as by the epigastric pulsation on which we were

wont to rely. Tricuspid murmurs, again, are held to be common instead of rare, a fact which is accounted for by their extreme inconstancy and fleeting nature. There is one point, however, on which all the text-books seem to have agreed, namely, that the presystolic murmur is strictly localized to the apex. A distinguished Edinburgh professor now comes forward to dispute that statement. He states that the murmur is often heard over the whole left border of the heart, and also over that portion of the front aspect corresponding to the mitral orifice.

The proper place of phlebotomy in medical practice is far from being settled. Dr. Wilks has lately contributed a very interesting paper on this subject to the *Lancet*. He quotes several cases where venesection gave relief in apparently desperate circumstances, of which the following may be taken as a sample. "In uræmic convulsions the effects are very striking; the right heart is relieved, and poisoned blood removed from the system. One case of this kind, indelibly fixed on my memory, is that of a neighboring dressmaker, who I believe is still alive. I was asked a few years ago to see this patient early one morning by her medical attendant as a satisfaction to himself and to her friends; she had been in convulsions all night, but he did not wish to disturb me before daybreak believing the case to be hopeless. I found a middle aged woman in constant convulsive movements, froth issuing from her mouth, quite comatose, and almost pulseless. The whole body was livid and the extremities cold. The doctor said she was dying, and therefore allowed me to bleed her. I took away a small wash-hand basin of blood, and while flowing the lividity passed off, the convulsions ceased, the body gradually became warmer, and when I saw her in the middle of the day she was calm, and conversed with me. Her life was as clearly saved by the bleeding as if I had dragged her drowning out of the water; and this is more than I can say from the use of drugs." No doubt in many cases of uræmic convulsions the effects are marvellous, still one would hesitate before carrying out this plan of treatment on emaciated and anæmic individuals. There can be little question of its value in impending death from paralysis of the heart, resulting from distended right side. The medical practitioner is only too familiar with the gasping struggles for breath, the blue face, and the distended veins, marking right-sided distension, and would gladly welcome any therapeusis consistent with safety. Besides the general lowering of blood pressure afforded by venesection, proposals have been made from time to time to give direct relief to congested organs. Not long since a medical man published an account of a plan for abstracting blood from the lungs which he had discovered by accident. Briefly expressed, his method consisted in plunging an ordinary perforated aspiration needle into the lung, where it was allowed to remain until there was a free flow of blood. The hæmorrhage was arrested by first plugging, and then slowly removing the tube, so as to allow a clot to form and remain *in situ*. Direct withdrawal of blood from the liver is effected by incision, hepatotomy, or more preferably by a long curved trochar needle. Then there are the other methods of local abstraction, cupping and leeches. One can hardly imagine the modern student up for an examination deigning to mention either of these time-honored modes of treatment.

The entertainment committee of the British Medical Association is able to announce a most alluring programme, including picnics, garden parties, and receptions galore, to say nothing of a ball given by the Mayor and Corporation of Bournemouth. That town is the centre of a number of places of interest, such as Weymouth, Portsmouth, Swanage, Portland, Christchurch, Wimborne, the Isle of Wight, and that ancient prehistoric monument, Stonehenge. All of these, as well as others not mentioned, can be reached by excursions, and at many of them receptions will be given by residents in the neighborhood. All these social enjoyments, however, will be eclipsed by the magnificence of the International Congress of Hygiene, which follows the association gathering at an interval of a week.

Everyone knows the advantage of a good bedside manner to the physician. In his chatty address to the students at University College, Sir Richard Quain told how its need was impressed upon him at an early stage of his career. When quite a young man he was placed in temporary charge of a patient, and full of the weight of his unaccustomed responsibility, his countenance grew longer and longer. When he was leaving one day the lady's husband followed him. "I greatly appreciate the anxiety you feel for my poor wife," he whispered, "but please don't let her see it again, for after you had left the room she asked me if you were the undertaker." Sir Richard told another little anecdote, also against himself. Once as a student he went up for an examination. He had read hard and felt that he knew his subject, so that his surprise was great when

he found he had not won the medal. Subsequent inquiries revealed the fact that the examiner had awarded his paper a certificate on the strength of the one answer he had been able to read; but the rest of the paper had been marked as totally illegible. How is it that doctors write so badly as a class? there must be some explanation somewhere. Talking of examiners and bad writing reminds the writer of an incident at a public school where the head master returned some papers with certain hieroglyphic scrawls on the margin. The united wisdom of his classmates at length deciphered the description, which contained a simple comment to the effect, "writing very bad." D. W.

London, June 7, 1891.

SELECTED FORMULÆ.

PRURIGO.

The following prescription is useful in the treatment of prurigo:

℞
Resorcini.....gr. xxxv.
Sulphur præcipitat.....ʒ v.
Acid. carbolic.....
Acid. salicylic.....aa gr. vij.
Chloral.....gr. xx.
Vaselini.....ʒ iss. M.
Sig. Use externally.

—*La Semaine Médicale.*

SEDATIVE FOR BABIES.

Dr. Van Goidtsnoven, of Atlanta, gives a formulæ with which he has had most gratifying results in restlessness, spasms, deliria, and in all cases requiring a sedative, anodyne, anti-spasmodic or somnifacient.

℞
Camphor. monobromat.....gr. xvj.
Ext. hyoscyami fl.....gtt. xvj–xxx.
Syrup lactucarii (Aubergier's).....fʒ viij. M.
S. A tablespoonful every hour till relieved.

—*Dixie Doctor.*

NEURALGIC HEADACHE.

Dr. E. P. Hurd, in his monograph on neuralgia, advises the following prescription for headaches of all kinds:

℞
Caffeini citrat.....
Ammonii carb.....aa ℈ j.
Elixir guaranæ..... ʒ j.
M. Sig. ʒ j every hour until the pain is relieved.

TREATMENT OF FISSURE NIPPLES.

℞
Balsam of Peru,
Tincture of arnica.....aa ʒss.
Oil sweet almonds..... ʒj.
Lime water..... ʒss.
M. Apply a small quantity several times daily.

ANATOMICAL PRESERVING FLUID.

The following is the formulæ of Rosenthal's liquid for preserving anatomical specimens:

℞
Muriate of quinoline..... 5 parts.
Marine Salt..... 5 "
Glycerin.....100 "
Water.....900 "

The only inconvenience attending the use of this solution is that it takes out all the coloring matter, the specimens assuming a very pale hue.—*St. Louis Med. and Surg. Jour.*

CREOSOTE EMULSION.

℞
Creosoti.....gtt. xvj.
Olei carophyl.....gtt. viij.
Olei cinnam.....gtt. iv.
Olei menth. pip.....gtt. iv.
Olei olivi..... ʒj.
Mucil. acaciae.....ʒiv.
Aquæ.....ʒvj.
M. Ft. Emulsionem.
Adde.
Glycerinae.....ʒiv.
Aquæ q. s. ad.....ʒiv.
M. Sig. ʒi. represents gtt. j. of creosote.

—*Western Druggist.*

WINE LEMONADE.

Dujardin-Beaumetz (*Bul. Gén. Ther.*) recommends a vinous lemonade to promote diuresis in typhoid and other fevers, and gives the following:

℞
Red wine..... .....O ss.
Tartaric acid.....ʒ ij.
Water.....O iss. M.

Laillez recommends the following:

℞
Syrup of citric acid.....ʒ ij.
Red wine.....ʒ viij.
Essence of lemon..... ♏ xv.
Water. .....O ij. M.

TREATMENT OF ERYSIPELAS.

This is the treatment Talamon also employs in cases of pustular variola. It consists in spraying with Richardson's apparatus for a minute the outer ring, both within and without the erysipelatous swelling, with the following solution:

℞
Corrosive sublimate } of each 15 grains.
Tartaric or citric acid }
Alcohol (90 per cent.).....1½ drachms.
Sulphuric ether enough to
make.....3 ounces 1 drachm. M.

This solution being caustic should not be thrown into the eyes nor in proximity to the nostrils. Spraying should be repeated two or three times a day.

Cayet considers this as the best remedy employed against erysipelas. If it is used in the beginning, the inflammation will yield during the first day, and the disease will be terminated by the fourth day.—*Revue Général de Therapeutique et de Clinique.*

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LEADING ARTICLE.

THE PRESENT POSITION AND SCOPE OF LITHOLAPAXY.

The operation of litholapaxy is a vast improvement over the old-fashioned lithotrity in which the stone was crushed and allowed to come away with the urine, or, in which the crushing of the stone occupied several sittings.

Litholapaxy combines the operation of lithotrity, or the crushing of the stone, with the immediate evacuation of the fragments. The objections urged against the single sitting with aspiration of the detritus, are: that urethral and vesical irritation is caused by the repeated passage of the lithotrite and of the tubes for aspiration; that violence is inflicted upon the bladder by the beak of the lithotrite in the many seizures of calculi fragments; that the friction and perhaps erosion of the mucous membrane by angular fragments during the search for the broken particles is injurious; and, finally, that the severe aspirations with the sudden and frequent distensions of the bladder are harmful. In our opinion, such arguments are erroneous when applied to litholapaxy as performed by a careful and experienced surgeon. When such damage is possible, the case is not one for a non-cutting operation but calls for a lithotomy. Recognizing that litholapaxy is not an operative procedure for indiscriminate use, but rather one applicable to a limited class of cases, we find that statistics, which are daily accumulating, bear ample testimony to the fact that the operation is no longer a novelty, but occupies a most favorable position in the surgical treatment of stone in the bladder.

In a recent number of the *British Medical Journal*, (May 9, 1891,) Dr. J. A. Cunningham speaks of litholapaxy as "*infinitely safer than any variety of lithotomy for suitable cases.*" His estimate for cases suitable for the operation is "*about* 90 *per cent. of all cases.*" The great advantage which this surgeon claims for litholapaxy over lithotomy is "that the patient is laid up for about four

days instead of three weeks, after the operation." This same authority gives a series of 102 cases of stone in the bladder, removed by him by the operation of litholapaxy, since January, 1890, *without a single death.* The weights of the stones removed varied from a few grains to over two thousand; their composition included nearly all the known varieties. The patients' ages ranged from 2½ to 70 years. The time occupied in an operation covered from a few minutes to an hour, the average being about nineteen minutes, and the average stay in the Hospital about six days.

Dr. Cunningham calls attention to a noteworthy feature in his series of reported cases, which is that in four of the cases, three of them with phosphatic stones, an operation had been performed within a short period for removal of a similar stone. If all these had been previously operated on by the crushing process, the author states "that it would have made a strong case for those who hold that formation is very likely to recur after crushing, fortunately, however, two of them had been operated upon by lateral lithotomy."

In the same Journal (*loc. cit.*), Dr. G. H. D. Gimlette publishes a paper entitled "Forty Successful Cases of Litholapaxy in Boys." The children's ages ranged from 2 to 16 years. The stones removed were of various composition and weighed from 6 to 395 grains. The number of days' stay in Hospital ranged from 2 to 15, the average being about 7.

Dr. P. J. Freyer, (*loc. cit.*) publishes a series of 165 consecutive cases of litholapaxy, in which occurred but three deaths. Amongst these 165 cases there were 99 adults—96 males and 3 females—and 66 male children—lads up to the age of 15 years. The ages of the adult males varied from 18 to 90, and of the male children from 2 to 15 years. The average number of days the patients were under treatment was, in the case of adult males, 6, varying from 2 to 28; in the case of male children, about 5½, varying from 2 to 21; and in the case of females, 4. The average weight of the *débris* of calculi removed was in adult males 242 grains, varying from 3 grains to 3 ounces and 1 drachm; in children 108 grains, varying from 2½ grains to over 3 ounces; and in women 435 grains. The weights given are those of the dried *débris.*

After a careful study of the 307 cases of litholapaxy as represented in the above quoted papers, we find that the operation was performed irregardless of the age of patient and the size or variety of the calculus present; also that but three deaths occurred in the entire series of cases—less than one per cent. Surely such a showing must commend the operation as a safe and simple procedure in experienced hands, and to be recommended in such cases where the stone is not very hard and is of moderate size; when the bladder is in a fairly healthy state, that is, free from tumors, not dilated or sacculated, or in the reverse condition, irritable, contracted, and with hypertrophied walls.

This then is the present position and apparent scope of the operation of litholapaxy, the results of which have not been equalled in any other large and important operation in surgery, and is entirely due to the introduction of Bigelow's method. Death has removed this great surgeon from our midst, but his name is imperishably associated with the modern operation for urinary calculi, and with the name "litholapaxy," which he introduced to denote and distinguish it.

Correspondence.

Editor of the Medical and Surgical Reporter.

Dear Sir:—In reference to the priority of use of the arsenite of copper in the treatment of diarrhœa permit me to mention a few historical facts. In the translation of *Jahrs Symptomen Codex* published in 1865 there is recorded a fragmentary proving of the arsenite of copper, from Noack & Trink's Handbuch, in which diarrhœa is mentioned and for which it must, under the law of similars prove curative. In 1868, W. James Blakely, M. D., read a paper upon the effects of the arsenite of copper, before the Homeopathic Medical Society of Pennsylvania, in which he referred to the same fact. In

January 1873, J. H. Marsden, of York Sulphur Springs, published in the *Hahnemannian Monthly*, an article upon the clinical uses of the arsenite of copper in which he refers to the cure of a case of diarrhœa by this remedy. In 1873 W. H. Holcombe, M. D. of New Orleans, published in the *Medical Investigator*, an article in which he called attention to the fact that the arsenite of copper had proved very useful in the choloraic diarrhœa prevailing during the summer of that year. In *Hering's Guiding Symptoms*, 1887, may be found the symptoms which had received clinical verification by Marsden and Holcombe. Trusting that you will give these facts to the profession that honor may be done Blakely, Marsden, Holcombe and other early investigators of this most useful drug,

I remain respectfully,

AUG. KORNDOERFER, M. D.

1728 Green Street, Philadelphia.

BOOK REVIEWS.

SEVERE VOMITING DURING PREGNANCY. By Graily Hewitt, M. D., F. R. C. P., Emeritus Professor of Obstetric Medicine, University College, London, etc., 8vo. pp. 148. London. Longmans, Green & Co.

This monograph will prove of great interest and value to every one interested in obstetrics. It is true it is a special plea for the author's theory concerning the causation of the severe or pernicious vomiting of pregnancy, but this plea is based upon a series of 120 cases of severe vomiting of pregnancy, which are given in detail. Those who do not accept the author's conclusions, will be greatly benefited by studying his material. Hewitt concludes that the severe vomiting of pregnancy is due usually to flexion of the uterus, incarceration of the uterus, or to rigidity of the cervix. In the chapter on treatment a careful review of the various methods of treatment which have met with favor will be found.

MASSAGE—A Primer for Nurses. By Sarah E. Post, M. D. Second edition, with seven original photo-plates. The Nightingale Publishing Co., 1891.

The author of this little volume shows herself to be perfectly familiar with her subject, and within the compass of fifty pages has outlined the various methods of giving both local and general massage, with full directions in regard to the management of the patients, the length of application, the Weir Mitchell treatment, etc. To those for whom the book is intended, or to others interested in the subject, the work will be found to contain all the information desired.

PERISCOPE.

THERAPEUTICS.

BORAX IN THE TREATMENT OF EPILEPSY.

Borax was proposed for the first time by C. Folsom in the treatment of epilepsy in 1881. Gowers reported four cases treated with this remedy, out of which in three a cure was obtained. Dr. Dijoud (El Siglo Medico, 1913, 1890) has tried it in twenty-five chronic epileptic patients in which the bromides had been used either without success or with no satisfactory results. The duration of the treatment was from four to seven months; the dose varied from one to six grammes daily. He entirely cured one, and notably relieved all the others, except six. From this it is apparent that borax is able to diminish—in a great number of cases which do not yield to the bromides—the frequency of the epileptic attacks. The dose may, without inconvenience, be carried up to six grammes per day, yet one should be careful to commence with one to two grammes daily, and progressively increase the dose. The following is a convenient form for a one to four-grammes dose:

℞ Sodii biborat, pulverizat.,.. ..... 1-4.00
Syrup corticis aurant,..... 30.00
Aquæ destillat.,..... 100.00 M.
Sufficient for one day.
SIG.—To be taken in two doses; one in the morning, and the other in the evening.

When the dose exceeds four grammes per day, one gramme of glycerin should be added for every gramme of borax over four grammes.

In the prolonged use of the remedy Dr. Dijoud recommends the following formula:

℞ Sodii biborat, pulverizat..... 10.00
Glycerine pur.,..... 6.00
Syrup corticis aurant,..... 94.00 M.
SIG. To be taken by the spoonful.

—*Journal of Nervous and Mental Diseases.*

THE THERAPEUTICS OF PAPAIN.

The uses to which the so-called digestive ferments can be put seem to be increasing, more particularly in regard to papain, the vegetable ferment obtained from the juice of *carica papaya*. As a remedy in indigestion it has the unquestionable advantage over similar bodies of animal origin of carrying on its action in an alkaline, an acid, or a

neutral medium indifferently. Its action on food is, therefore, not limited to any particular region of the alimentary canal but continues so long as there is food to be acted upon, whether in the stomach or intestines. Its action on diphtheritic exudative membranes again is extremely interesting, and since it has been demonstrated bacteriologically that the specific bacilli thrive and multiply therein, the propriety of removing the membranes as they form has been established on a scientific basis. Hence the solvent action of papain on these membranes is a valuable addition to the resources of the practitioner in dealing with this disease, for it is not only more promptly effectual, but is free from the suffering which is caused by the brutal practice of removing the exudation by violent rubbing or *grattage*. The subjacent mucous membrane is thus denuded and rendered accessible to local treatment of another kind, and the throat is prevented from continuing to be a focus for the elaboration of the diphtheritic poison. Still more recently these dissolving properties have been turned to account for the purpose of bringing about the arrest of growth, and even the retrogression, of malignant neoplasms, and although this plan of treatment has not yet received official sanction it is claimed to have yielded good results in the hands of competent observers, and it is sure to be admitted to the test of practical experience. These bodies belong to a class of agents in respect of which the scientific chemist is significantly silent. The property which they possess of causing chemical change in bodies with which they come into contact without the ratio of quantity and effect which obtains elsewhere in the chemical world without themselves undergoing any change, is a curious and hitherto unexplained phenomenon. It is not improbable that in the future these powerful qualities may find a much wider application in therapeutics than is at present the case, and the benefits should be commensurate with the intensity and comprehensiveness of their effects.—*Medical Press.*

SALICYLATE OF SODA AS A CHOLAGOGUE.

Prof. Germain Sée, in an article on hepatic colic, published in the *London Lancet*, calls special attention to the use of salicylate of soda, which he has found to be the most efficient of all cholagogues in promoting the expulsion of gall-stones. The well known cholagogues were found worthless in the ailment, for they stimulate the biliary secretion by increasing the solid elements, which is not desirable.

Salicylate of soda stimulates the biliary secretion by increasing its fluid element, which is the principle indication in the expulsion of gall-stones.

The cholagogue property of salicylate of soda was made known by Rutherford, but has not received much attention; with the additional recommendation of Prof. Sée, supported by his vast clinical experience, the remedy should be considered worthy of trial.—*New Remedies.*

THE ABSORPTION OF DRUGS FROM OINTMENTS.

Huff summarizes the results of his experiments on the absorption of drugs from ointments, with the bladder of goats, as follows: With vaseline and iodide of potassium, exosmose commenced at the end of the first hour; with lard and iodide of potassium, at the end of the ninth hour; with lanolin and iodide of potassium, the result was *nil* up to the twenty-fourth hour. With vaseline and carbolic acid exosmose commenced at the end of two hours and three-quarters; with lard and carbolic acid at the end of seven hours; with lanolin and carbolic acid the result was *nil* at the end of twenty-four hours. With vaseline and resorcin exosmose commenced at the end of the tenth hour; with lard and resorcin at the end of the fifteenth hour; with lanolin and resorcin the result was *nil* at the end of the twenty-fourth hour. He therefore concludes that if it is desired to obtain the rapid absorption of drugs into the circulation, it is better to use vaseline, and that for local therapeutic purposes pomades made with vaseline should be preferred. This latter substance causes the incorporated medicaments to keep for a much longer time.

Regarding the effect of age on the absorption of drugs, Dr. Yatsuty conducted some experiments in relation to this subject, in the Zhitomia Municipal Hospital, on healthy male patients of from 8 to 80 years of age, the drugs experimented with being iodide of potassium and salicylate of soda. The dose was made to depend upon the body-weight, a grain being allowed for each 10 kilogrammes. The drug was administered in a gelatine capsule, and then the urine was examined every 3 minutes. When the iodide was given the saliva was examined every 2 minutes, but not in the case of the salicylate, as there was not any evidence of salicylic acid in the saliva. The conclusion arrived

at was that the younger the subject the more rapidly the absorption, as tested by the secretions, occurred. Thus a boy of 9, weighing 25 kilogrammes, taking a dose of 2½ grains of iodide of potassium, generally gave the reaction in the urine in nineteen minutes; a man of 36, weighing 66 kilogrammes, and taking a dose of 6½ grains, showed no reaction in the urine until 31 minutes had elapsed; and a man of 76, of about the same weight, and taking the same dose, showed no reaction in the urine for 37 minutes. Salicylate of soda was absorbed in boys and young men in about 15 minutes, while in middle-aged men it required about 20 minutes, and in old men about 25 minutes. There were, however, a few exceptions, so that, although the average rapidity of absorption distinctly diminishes as age advances, it is not possible to say with certainty that a particular individual will absorb one of the drugs mentioned more rapidly than another individual who is a great deal older.—*Pharm. Era.*

SERIOUS SYMPTOMS FOLLOWING MORPHIA AND COCAINE.

Dr. Julio San Martin, of Havana, describes in the *Chronica Medico-Quirurgica* a somewhat singular case, where very serious effects followed the application of morphia lotions, associated with cocaine ointment, to the vulva, in the case of a stout lady who had for some years been the subject of diabetes. At the time when the above medication was prescribed there was a considerable quantity of sugar in the urine, the amount passed varied from one to four litres in the twenty-four hours, and the pruritus had become unbearable. The treatment was found to give so much relief that the patient began to resort to it five or six times a day. Very soon she began to suffer from sleeplessness, general excitement, and restlessness, and a terrible sense of impending death. There were, too, delusions—as, for example, that the right side was paralyzed, which was not the case. She complained of a sensation of pricking in both arms, and of something which she thought was the "bone of the heart" moving about inside the chest. Once these symptoms were so severe that Dr. San Martin was called up at night. He gave some bromide at first, and, after having ascertained that the urine contained a trace of albumen and nearly 8 per cent. of sugar, prescribed chloral and morphia internally. This treatment unfortunately appeared only to produce an exacerbation of the excitement, and it then occurred to him that the symptoms might be due to the previous medication. Drugs were therefore given up and recourse had to hot baths, under which the patient became much calmer and improved in every way, even the sugar in the urine decreasing in a very marked degree. Dr. San Martin has frequently prescribed morphia or cocaine for the severe pruritus vulvæ sometimes observed in diabetic patients, without noticing any toxic effects such as occurred in the present case. He remembers two cases in which neither of the two drugs appeared to be of much use by itself, but where a satisfactory cure was obtained for the itching by combining them. The absorption of a sufficient quantity of cocaine to produce toxic effects from an ointment is certainly rare, and Dr. San Martin is disposed to think that in this case the fact of the kidneys having to excrete a large quantity of sugar may have produced a condition favorable to the absorbtion of cocaine, or perhaps that the patient had an idiosyncrasy making her peculiarly susceptible to small quantities of this drug.—*Lancet.*

THE THERAPEUTICS OF OXYGEN GAS.

The medicinal employment of oxygen gas by inhalation has in this country been almost discontinued. Up to quite recently, the difficulty of procuring a supply of the pure gas, and the trouble, delay, and expense attending its administration did much to prevent it occupying such a place in the therapeusis of the practitioner as its known physiological effects warrant. At present, oxygen gas can be obtained from any respectable firm of druggists with the same facility as any other drug. The compressed gas in iron bottles is as portable as a bottle of iodide of potassium, and the apparatus for its administration is inexpensive and more easily managed than another inhaler. Still, the unaccountable fact remains that one of our most active and reliable therapeutic agents is unused, or used so very little that it may be said not to find a place in practical therapeutics. A quick and powerful respiratory and cardiac stimulant, it offers to us the needed remedy in cases of asphyxia, whether resulting from poisonous gases or general anæsthetics; in the suffocative agony of *angina pectoris* its efficiency has again and again been proved, latterly in the well known case of General Philip Sheridan, in which the treatment followed on the lines of the case of Dr. Robert Reid, of Dublin, who in 1817 used and advocated the gas as a

remedy for the disease. Dr. Reid placed several cases on record in which he found oxygen gas by inhalation a very valuable remedy, notably one of a man, æt. 64, who prior to its use had suffered dreadfully from angina. The effect of the gas is, however, only temporary, but there are thousands of cases where temporary aid would save life. In cases of poisoning and anæsthetic narcosis, a powerful stimulant would in many cases be invaluable. How much better a whiff of pure oxygen than artificial respiration in chloral poisoning or chloroform narcosis! Yet with the exception of Mr. Foy's work on "Anæsthetics" and M. Demarquay's "Pneumatology" we are not aware that its use is advocated. Hospitals are provided with electric batteries to resuscitate the asphyxiated and to stimulate the respiratory function, but a more useful and active remedy, oxygen, finds no place in the emergency apparatus of the operating theatre. We hope, however, soon to be able to report that all our general Hospitals are provided with a stock of oxygen gas and a suitable apparatus for its administration. To its value as an antidote in poisoning by carbon gases, especially of the methane series, Colonel H. Elsdale, R. E., bears witness in the present number of the "Nineteenth Century." A man of the Engineer Corps was found apparently dead, "there was no action of the heart that could be felt, and no perceptible breathing." The patient had been inhaling coal gas from a burst balloon for some considerable time, and the Colonel considered that oxygen gas was the most suitable antidote. A tube attached to an iron bottle of compressed oxygen gas was placed in the man's mouth. "The effect of the oxygen was to cause him instantly to revive and clutch the nozzle of the valve convulsively with his teeth." The man who had been "to all appearances dead, presenting the aspect of a livid corpse, his complexion being a ghastly purple or plum color, in perhaps ten seconds, or fifteen seconds at the outside, from the first rush of oxygen into his lungs, was in such violent paroxysms that I was obliged to order four of his comrades to hold him with all their might." Half an hour later the patient was calmly walking back to barracks, all danger being at an end. Such is the report of this most instructive case as given by a practical and educated witness. We commend it to our readers, and especially to those concerned in the administration of anæsthetics.—*Medical Press.*

"Doctor, what do you do when you have a bad cold?" "I cough, Madam."

MENTHOL IN THE LOCAL TREATMENT OF ERYSIPELAS.

Dr. A. L. Benedict, recently reported the admirable results from the use of menthol in erysipelas. G——, a man of middle age, had his first attack of erysipelas eighteen years ago, when the head and face were affected. Six years later the right foot was involved. In 1887 two attacks occurred in the left ankle and foot, there being a period of a week or two between the attacks. In the Spring of 1889, the right foot was again the seat of the disease with considerable lymphangitis along the course of the internal saphenous vein. This attack was treated locally with naphthalin ointment, and it lasted eight days from the initial chill to the defervescence, the highest temperature observed being 104.8 on the fifth day. Eight to ten days was the duration of all the attacks which the patient had experienced, and all of them were of moderate severity.

On February 10, 1891, at 10.00 A. M., the patient was siezed with a chill. He walked home, about a mile, and went to bed. Ordinary domestic remedies and diffusible stimulants were employed but the chilly sensations did not disappear for two hours. Besides the sensation of cold there was violent retching but without emesis.

Partly on account of the writer's lack of faith in internal medication in erysipelas, partly on account of the chronic lithemic condition of the patient and the irritability of his stomach, the treatment was limited, with the exception of a few doses of acetanilid and some other symptomatic treatment, to the local application of a fifteen per cent. solution of menthol in liquid petrolatum. The writer has never heard of such a use of menthol; he was led to try it from its known physiological action and from some practical experience with it in the treatment of conditions of the respiratory apparatus. Most of the essential oils contain some principle which is anæsthetic and antiseptic—actions which are manifestly called for in the local treatment of erysipelas and, therefore, it would not be surprising to learn that others have used menthol in this disease.

After the first thirty-six hours a marked diminution in the rash was noticed, corresponding to the decline of temperature. On February 14th, a small bleb was opened on the great toe, and on the next day no trace of disease remained, except the thickened skin of the foot and an ecchymosis on the great toe, bearing testimony to the original severity of the disease. On the evening of February 15th, the foot was washed with a warm solu-

tion of mercuric chloride (1 : 4000), and for several days the patient was convalescent. Late in the evening of February 20th, the patient had another chill, which proved to be the beginning of another attack of erysipelas, almost identical in its local lesion, temperature, and symptoms with that just described. The menthol treatment was resumed, and the attack had subsided by February 26th.

As far as this case is concerned, the theoretical considerations that led to the adoption of the menthol treatment were supported by the practical result. The patient had never had so speedy recovery under other treatment, and he declared that the usual discomfort and pain attending the attacks were almost entirely relieved by the menthol. The patient's family expressed a decided preference for the odor of menthol as compared with that of naphthalin. The second attack—and that it was a second attack and not a recrudescence is plain when we consider the five days of normal temperature and the lack of either local or constitutional symptoms—is easily explained. Owing to a disturbance in the domestic economy, the patient's room was at the time the only one in which he could be made comfortable, and thorough disinfection of the room while he was in it was impossible. In some way, perhaps on account of the tenderness of the skin of the foot, possibly—though the patient will not admit this—through some minute abrasion, produced by picking off the dead cuticle, germs entered from the air of the room and produced the second attack.

MEDICINE.

TWO CASES OF IMAGINARY POISONING.

Dr. Bernard Gordon, records in the *Medical Record*, the following cases:

Case I.—November 30, 1890, I was called to Mrs. S——; she was suffering from acute metritis, which was produced by the unskilful and rough manipulations of an ignorant midwife, who treated her for sterility. Having prescribed quinine for the fever, and having ordered hot vaginal injections with sublimate tablets, and the application of hot linseed poultices to the abdomen, I departed. The next morning I was called there to come immediately, the husband of Mrs. S—— poisoned himself with a tablet. On arriving I was surprised to find Mr. S—— without any symptoms of mecurial poisoning; he looked simply pale and frightened; but on inspecting the tablets, I understood that the druggist gave, instead of sublimate 7.3 gr., some other tablets. I went at once to the druggist, and found out that he dispensed hydronaphthol tablets, 1 grain in each; he was sorry for his mistake, but he blamed the apothecary in the neighborhood, who sold them to him also by mistake, instead of sublimate tablets. We can arrive at the following two conclusions: first, that Mr. S—— had extraordinary luck in escaping death, and second, that the druggists were very careless. I think this is the only useful error a druggist ever made, and therefore worthy of report.

Case II.—April 27, 1891, I was called in a special hurry to Mr. H——; his wife, I was told, poisoned herself. Arriving there I found Mrs. H—— fainting, being supported by her husband and servant. I examined at once her pulse and found it normal. I applied then a few drops of strong aqua ammoniæ on a handkerchief to her nose, and she opened her eyes, began to breathe deeply, and all at once became red in the face and started vomiting. I inquired what poison she took, but nobody except herself knew, and she did not answer. The husband meanwhile explained to me that his wife quarrelled with him at the dinner-table, and when he went away to his store she took some poison; he just arrived before me and gave her plenty of warm water to produce vomiting. "What poison did you take?" I inquired again of Mrs. H——, when she stopped vomiting after she had swallowed a few pieces of ice. "A teaspoonful of sulphur," she answered. I asked her how she came upon the idea of taking sulphur, and she explained to me, that she decided to poison herself by soaking matches in water and then drinking it, but being aware of the fact that matches are made of sulphur, she rather took sulphur, in order to end her life more quickly and without suffering. Blessed ignorance! If she had known a little more than that, the druggist might just as well have sold her five cents worth of phosphorus, instead of the sulphur.

THE RELATION OF URIC ACID TO GOUT.

Cammerer (*Deutsche med. Wochenschrift*, March 5, 1891) studies the advances made in the knowledge of the relation of uric acid and gout. He recognizes uric acid as a nitrogenous product from the albumen of the body with the formulæ of $C_5H_4N_4O_3$, produced not in the kidneys but in the liver; he regards it as an ultimate product,

not as a step in the process of urea-formation. It is distinguished from other constituents of the urine by its extreme insolubility. He prefers the silver method to the hydrochloric acid method in the determination of uric acid. Uric acid has been discovered in the blood of gouty persons, leucæmic cases and in the blood of birds. A thousandth of one per cent. can be detected by the silver method. Garrod found uric acid in the blood of patients suffering from lead poisoning as well as in gouty cases, from which he endeavored to create an analogy between the two conditions. The analyses reported by different observers vary most widely, being in many cases strongly contradictory, due undoubtedly to faulty methods of observation. Cammerer believes that these researches are much weakened by the omission of the estimation of the urea secretion and production. The conclusion is reached from the examination of the urine, that either gouty persons lay up a certain quantity of uric acid in the body, or the destruction of the albumen molecules results in the production of less uric acid than is produced normally. If the repeated examinations of the blood confirm the theory that there is an increased amount of uric acid in the blood of gouty persons it is due either to an evident increase of uric acid formation, as in birds and leucæmic cases, or it is due to an insufficient excretion of the manufactured product in the usual way. The first assertion has not yet been fully established; the other statement, as pointed out by Garrod, is sufficient to produce the diseased condition. This deficit may be so small that it cannot be detected; hence in these cases there is no violent change in metabolism and the gouty person may retain good digestive powers indefinitely. The relation of urea to uric acid in normal adults is about 100 to 2.8; in gouty persons, not under treatment, it averages about 100 to 3.1, hence the relative uric acid production and secretion are generally only slightly increased.—*Univ. Med. Mag.*

THE SENSORY AND MOTOR AFFECTIONS OF THE TONGUE.

MM. Du Pasquier and Marie have gathered together into an interesting paper the symptoms observable in the tongue, which contribute to the clinical evidence of nervous diseases, such as tabes, bulbar sclerosis, and others, and consider them under the three headings of sensation, motion, and nutrition. *Anæsthesia* of the tongue may be the result of local cerebral injury, of disease of the fifth nerve, or of hysteria; but from whichever cause it originates, it is almost always unilateral. It used to be considered as an almost diagnostic sign of hysteria, but more accurate knowledge of cerebral pathology has shown us that it may accompany motor weakness arising from injury of the occipital lobe, the optic thalamus, the posterior third of the internal capsule, the pons varolii and the external layer of the crus cerebri. In all cases except those originating from the pons the same side of the tongue is affected as of the body. In cases also of injury to the peripheral portion of the fifth nerve, such as by disease of the meninges or the bones of the skull, there is hemianæsthesia of the tongue. In hysteria it is much more frequent on the left side than the right; it may come on after some preliminary abnormal sensations of pricking or smarting, or sometimes suddenly after a hysterical attack without any knowledge on the part of the patient; and it lasts for a most indefinite time, short or long. *Hyperœsthesia* leading up to pain is the result of local disease of the tissues of the tongue, such as inflammation or cancer, or of neuralgia of the main trunk of the fifth, or more especially of the lingual nerve. In a few cases of tabes and general paralysis there are pains in the tongue associated with pains in the face; and now and then a feeling of great pain and tenderness in a limited spot, as if of an ulcer, but without any visible sign; an "imaginary ulcer," is preliminary to a general disease of the nervous system such as general paralysis (Verneuil, Fournier). Then with regard to the special sense of the tongue—*the sense of taste*, the different parts have somewhat different susceptibilities. The posterior part, which is innervated by the glosso-pharyngeal nerve chiefly, is the special seat of bitter tastes; the edges and point of the tongue, which are supplied by the lingual and the chorda tympani, are specially susceptible to the sweet and acid tastes. By the paths of these nerves the impressions of taste are carried to the grey matter of the occipital cortex along a somewhat uncertain course, probably through the middle of the thalamus opticus and the innermost fibres of the internal capsule; but they do not seem to reunite in any special cortical centre of taste. There is loss of taste more or less complete along with injuries of the glosso-pharyngeal, the trigeminus and the facial (acting through the chorda tympani). In a

well-known case of Pope's a thrombosis in the vertebral artery pressed upon the trigeminus, and so caused loss of taste on one side of the base of the tongue. Claude Bernard first showed that in cases of injury of the facial nerve the sense of taste is sometimes lost and sometimes retarded, whilst abnormal acid or metallic tastes are sometimes induced in the anterior two-thirds of the tongue. There is occasionally morbid exaltation or delicacy of taste in hysteria, hypochondriasis, catalepsy, and somnambulism. *Paralysis*, partial or complete, may be caused by injury of any part of the motor tract which may be traced upwards through the hypoglossal nerves to nuclei in the medulla, and from them by fibres running through the pons and internal capsule to a cortical centre. That the tongue alone should be affected by a cortical injury is a very rare accident, as in the case of a wound by a bullet recorded by Dugout and Bally (*Gaz. Méd.*, 1878, p. 23). There are a few cases in which symmetrical disease (hæmorrhage, softening, or tumor) of both hemispheres in the extra-ventricular nuclei has affected the motor tract of both sides of the tongue, and brought about a nearly complete paralysis with some likeness to the progressive bulbar paralysis of Duchenne, but differing from it in leading to no atrophy or loss of reflexes or loss of electric reaction in the muscles, and involving no laryngeal paralysis or cardiac and pulmonary disturbance. There is another group of cases, in which diseases of the spinal cord propagate their effects to the medulla, and thereby make themselves felt upon the tongue. This happens almost always in lateral amyotrophic sclerosis, cervical hypertrophic pachymeningitis, and disseminated sclerosis. In this last-named disease the slow, dragging character of the speech which results from the imperfection of the movements of the tongue is very marked. In locomotor ataxy there is often some hemi-atrophy of the tongue, but little impairment of speech; in hereditary ataxy (Friedreich's disease) there is much more constant difficulty of speech, leading quickly up to complete inability on the part of the patient to make himself intelligible. In facial paralysis the stylo-glossus is affected on the same side as the paralyzed muscles of the face, and the tongue turns towards the paralyzed side of the face; except in those few cases where facial paralysis has a cerebral origin, which is accompanied by paralysis of the genio-glossus and a turning of the tongue away from the paralyzed side of the face. From the local paralysis which accompany the use of lead and mercury the tongue is remarkably exempt, but it is occasionally affected by the weakness or inco-ordination which follows acute fevers, more especially enteric.—(*Le Progres Médical*, pp. 107, 123, Feb. 7, 14, 1891.)

A NEW CONTRIBUTION TO OUR KNOWLEDGE OF REFLEXES.

Erb (*Wiener Med. Wochenschr.*, 1890, p. 879) has contributed an important paper on this subject. He first discusses how far the anterior cornual cells of the spinal cord are concerned in the production of a tendon reflex, and he points out that many of the cells may be totally destroyed and yet the tendon reflexes will remain perfect for the rest of life, and he does not regard it as a satisfactory explanation that the remaining cells take on the function of those which are destroyed. Further, he argues that in many cases in which the loss of the reflexes has been attributed to destruction of the cells of the spinal cord the anterior nerve roots have been severely damaged, and in progressive muscular atrophy the loss of the reflex does not take place until there is considerable change in the muscle itself. Erb next refers to the clinical fact that, after hemiplegia with secondary degeneration, there is often an increase of the tendon reflexes on the non-paralysed side; this most authors have been accustomed to refer to an increase in the irritability of the reflex centres on the unparalysed side, consequent upon their physiological association with those on the paralysed side. Erb considers this hypothesis unnecessary now it is known that descending degeneration takes place on both sides of the cord. Lastly, he does not consider that in the explanations of the alterations of tendon reflexes after apoplexy, sufficient allowance has been made for the alterations produced in the surrounding parts of the brain by the vascular disturbances which must be associated with a large hæmorrhage.—*Brit. Med. Jour.*

HISTOLOGY OF ACNE VARIOLIFORMIS.

Dr. Bronson (*Jour. of Cut. and Genito-Urin. Dis.*, April, 1891,) publishes the results of a microscopic examination in a case of acne varioliformis, which seems to show that the lesion begins as a deep-seated small-cell infiltration about the coil glands, which are situated beneath the hair follicles. In the beginning several independent foci of inflammation are present, which subsequently

coalesce, producing a generalized infiltration of the derma with a tendency to central degeneration. As the infiltration approaches the surface it penetrates and disintegrates the overlying epidermis, separating it from the adjacent tissue. The central dry necrotic mass which represents the final stage in the evolution of the pathological process is made up of the epidermis with the underlying tissues of the derma, which have undergone a peculiar degeneration, and have become separated from the adjoining tissue by a sharp line of demarcation. The examination, unfortunately, gives little insight into the nature and cause of this singular affection, nor does it reveal why the affected tissues should be thrown of *en masse* rather than undergo a liquefactive degeneration. One would be led to suppose, however, that some agent, bacterial or chemical, had played an active part in the inflammation, causing a reaction on the part of the tissue and an endeavor to throw off the offending cause and its results. The formation of pus, which is not a constant feature of the papules, was doubtless due to a secondary infection by pus cocci.—*Brit. Med. Jour.*

SURGERY.

A NEW METHOD OF PERFORMING JOBERT'S OPERATION.

Dr. Fred. B. Robinson, in the *Annals of Surgery*, says that the present modification of Jobert's operation is with the hope of improving the safety of the operation. The danger of Jobert's operation proved very great in our experiments, and of course, the main danger lies in the occurrence of fæcal fistula at the points of the invagination sutures. The modifications or improvements he has to offer on Jobert's operation are: First, the avoidance of the invagination sutures, and second, the use of a rubber tube to keep the bowel from invagination at the seat of operation; and third, to keep the lumen of the bowel patent at the same point. The invagination in Jobert's operation produced fæcal fistula (with both catgut and linen sutures,) and also caused death. The idea that invagination of the intestine will continue to a point of obstruction, from simply turning in a small part of its end, to do the operation, he never saw recorded, but it will actually happen, and it killed several of our dogs. Hence, to avoid this disaster, an operation should only turn in about one-half to three-fourths of an inch of the end of the gut. The muscles from that short bit of gut can not get purchase power to progress. In closing a gut end, only one-half an inch should be turned in, and then sutured with a few continuous Lembert sutures. The addition of a rubber tube, he thinks, increases the safety of the operation very much.

The rubber tube certainly aids in preventing subsequent invagination at the seat of the operation, and the longest part of the tube should be above (three-fourths) the point of operation. The tube keeps the gut lumen patent. It holds the two serous surfaces, which are to unite, in constant approximation. It prevents the gut from wrinkling and allowing fæcal extravasation. It produces the great essential of healing, which is mechanical and physiological rest, which, alone, induces appropriate cell proliferation. The tube is held in its position by one or two sutures passed through the edge of the proximal intestinal end and through the tube. One can determine how long the tube will remain in position by the amount of intestinal wall, the suture, which holds the tube, embraces; or on the kind of sutures (catgut or silk or linen).

The main steps of the operation are the severing of the gut and the determination of the proximal and distant bowel, or the direction of the fæcal current. The serous surface of the distal gut is scarified for one-half inch and invaginated to the same extent. Now, a rubber tube which snugly fits the gut lumen is pushed up into the proximal gut and stitched there, (he generally used a tube five inches long, placing about three inches above and two inches below the point of operation.) An inch of the serous surface of the end of the proximal gut is scarified. Then the proximal gut is inserted into the invaginated distal bowel for one inch. A circular row of Lembert sutures are applied at the junction of the serous surface of the proximal and distal bowel.

The same surface for one-half inch adjacent to the sutures is well scarified, and an omental graft wrapped around and sutured in position. The omentum is carefully respread over the intestines, and the belly closed.

The avoidance of the invagination sutures is a great step in advance. The addition of the rubber tube and scarification, with an omental graft, add infinitely to the chance of recovery. Of course, Jobert's operation, and this modification of it, is only to get something better than the dangerous circular enterorrhaphy. Circular enterorrhaphy was found, in the experiments, to show

very clearly the following dangers, which he has previously noted, but which he repeats in order that attention may be directed more to them:

1. Circular enterorrhaphy paralyzes the gut at the seat of operation, and hence does not so readily relieve the fæcal obstruction, which is the immediate object of surgical interference.

2. Fæcal fistula is apt to arise at the point of the operation.

3. Gangrene or sloughing may arise from the pressure on the tissues of numerous sutures.

4. The lumen of each gut may not be of the same size, and thus present difficulty in union.

5. The pathological changes in the bowel, due to obstruction, offer impediments. The gut may be stretched so thin that a needle can not be passed between the muscular layer and mucous layer without danger of penetrating the mucous membrane and causing fæcal fistula. Also the stretching of the bowel may seriously impair the power of healing. The trauma has destroyed the vascular and nervous integrity of the tissues of the gut wall.

EPISTAXIS.

In a recent paper read before the Southwestern Ohio Medical Society Dr. T. V. Fitzgerald said that the successful management of a severe case of epistaxis depended in a great degree upon a correct diagnosis of the lesion essential to the existence of the hæmorrhage. A correct diagnosis can not be made without the use of reflected light and the nasal speculum, and indeed, such of the armamentarium as are used in making a careful and thorough examination of the nasal cavities. In making a diagnosis it must be borne in mind that epistaxis is a symptom of an intra-nasal lesion. Slight attacks may be passed by with little regard, unless frequent, when, if for no other purpose, than to relieve by appropriate treatment the intra-nasal lesion, a careful examination should be made. The number of remedies used to arrest nose bleed, and most of which are useful at least in mild cases, are legion. It is not the purpose of this paper to discuss the merits of all the remedies thus used, but rather to emphasize the method of applying them. Such remedies as plunging the hands and feet in water as hot as can be borne, or applying cold water, or the ice pack to the forehead, face or back of the neck, do very well when the hæmorrhage is largely due to increased blood pressure plus intra-nasal lesions, but when we have erosions of the septum nares, or even slight excavation, such remedies are utterly incapable of arresting the hæmorrhage. If the bleeding point has been located, and the nasal mucus membrane been thoroughly anæsthatised with cocaine, there is no more trustworthy remedy than water as hot as can be borne. Having the sensibility of the nasal mucus membrane deadened you can use the water at a very high degree of temperature; if it is not used at a very high degree it is not hæmostatic. The writer has never failed to promptly arrest the severest case of epistaxis that came within his care by the use of this simple remedy. The application of pledgets of iodoform gauze to the bleeding points, or in case of diffuse hæmorrhage, will in many cases act promptly. It would be well to always apply the gauze after the hæmorrhage has been arrested by the use of hot water in order to maintain as near an aseptic condition as possible. Tamponing the nose is a remedy the use of which is to be greatly depreciated and should never be resorted to unless all other remedies have utterly failed. It is the most painful method of treating epistaxis, the suffering lasting several days. The pent up blood and secretions affording excellent material for cultures of pathogenic germs. Prof. Gross reports several deaths from septicæmia from its use. Other writers have reported cases of erysipelas, fatal tetanus, inflammation of the eustachian tube, abscess of the middle ear, etc. The necessity of using the tampon will indeed be rare if the application of less painful and less dangerous remedies as hot water, iodoform gauze, lemon juice, tannic and gallic acids be thoroughly made to the bleeding point.

GASTROSTOMY IN CANCER OF THE ŒSOPHAGUS.

In some clinical comments on five original records of gastrostomy performed in cases of cancer of the œsophagus (*Revue de Chirurgie*, April, 1891), MM. Terrier and Louis, of the Hospital Bichat, Paris, advocate this plan of treatment, the frequently fatal results of which, it is held, are due more to the enfeebled condition of the patient than to any risks attending the operation itself. The authors consider how certain inconvenient results which have been observed in cases of recovery may be prevented by improved methods of operating, and sum up their views in the following conclusions:—(1) Gastrostomy in cases of cancer of the œsophagus is decidedly a justifiable palliative operation,

and ought to be proposed to the patient; (2) its performance is very simple, and the immediate results are not attended with much gravity; (3) the ulterior evils due to the presence of a gastro-cutaneous fistula may be avoided by opening the stomach as near as possible to the superior curvature, by making only a small orifice, and by dispensing with the subsequent use of occluding agents; (4) then simple dressings only will be needed, and these should consist of inert powders, or of such (carbonate of magnesia, for instance) as are capable of neutralizing any drops of gastric fluid that might be discharged during any forcible effort made by the patient; (5) the results of gastrostomy with regard to the survival of the patient are influenced by the duration of the disease and the extent to which the stomach is involved. Certainly in France, intervention, as a rule, is too late, and the chances of survival are consequently much diminished.—*British Medical Journal.*

SUCCESSFUL TREPHINING FOR TRAUMATIC RUPTURE OF THE MIDDLE MENINGEAL ARTERY.

In the *Gazette hebdomadaire de mêdecine et de chirurgie* for December 27, 1890, there is a report by Dr. Rochet of the following very interesting case: A man, aged twenty-eight, was thrown violently to the ground, striking upon the right parietal protuberance; he was carried, unconscious, to a house, where he remained for some twenty-four hours before being removed to a Hospital. He was then like a person in a deep sleep, though when interrogated he would open his eyes but make no other response; there was ecchymosis of both eyelids, of the zygomatic region, and of the temporal fossa, but none of the conjunctivæ, with swelling of the entire ecchymosed region of the right side. Pressure over this region produced pain sufficiently severe to rouse the patient from his torpor and produce grimaces. There was no injury to the integument, and there was no hæmorrhage or serious discharge from the ears or the nasal fossæ. There was neither paralysis of the face or extremities nor incontinence of urine or fæces. But on the third day after the accident facial paralysis began, with conjugate deviation of the eyes; the left arm was completely, and the left thigh and leg were partially, paralyzed; cutaneous sensibility had diminished; the right pupil was widely dilated; and the right cornea was almost absolutely insensible. On the fourth day, if he was asked where and how he suffered, he constantly indicated the right side of his head; during that night he was agitated, crying at times, at others attempting to rise. He remained in the condition noted on the third day for five days, when surgical intervention was decided upon. The operation was begun, after the usual antiseptic preliminaries, with a crucial incision over the right fissure of Rolando, and on throwing back the flaps a long line of fracture was seen crossing the parietal bone. A trephine was applied where this line crossed the line of the fissure, and on removing the bone button there was a jet of black blood; this ceased spontaneously, disclosing a black clot at the orifice. The orifice was enlarged with a gouge and mallet to from 6 to 7 centimeters in length, by from 2 to 2.5 centimeters in width. There was clot in all this region; that was removed carefully with the finger and curette, disclosing a cavity as large as an orange occupying all the temporo-parieto-occipital region and limited externally by the cranium and internally by the flattened right hemisphere. While the last of the clot was being removed there was a jet of arterial blood that stopped this work. The cavity was washed with boric-acid solution and gently packed with iodoform gauze; no sutures were taken in the scalp; the external wound was dressed with sterilized cotton. During the evening of the day of the operation the patient recovered his consciousness, and the hemiplegia was greatly improved. The wound was dressed on the day after the operation; the cavity had decreased in size, there were some clots, and the hemisphere pulsated. On the succeeding day the facial paralysis disappeared, though the tongue still deviated slightly. The patient progressed satisfactorily to recovery, the only lingering symptoms being an awkwardness of the left arm and occasional vertiginous sensations.—*N. Y. Med. Jour.*

VENESECTION AGAIN.

Venesection tries very hard to get upon its feet again. Every now and then we come across an article or a discussion in which this ancient therapeutical stand-by is petted and praised and coddled; but after this comes silence again. The pride and staff of our forefathers seems to remain in hopeless senility. Phlebotomy does not get popular. Medical fashions, we are told, run their course, and after a time re-appear. Calomel has been taken up again, and perhaps as many people take mercury now as ever, though in more modest doses. But the modern doctor still will not bleed.

At a recent meeting of the Royal Medical and Chirurgical Society, Dr. Pye-Smith told us again how useful venesection is. He reports fifty cases! Half a century ago every country doctor could report as many in a year. Dr. Smith thought venesection indicated in cyanosis with distention of the right side of the heart, whether from pulmonary or from some other obstruction to the circulation; in the intense pain of thoracic aneurism; and in uræmic and prolonged epileptic convulsions. Dr. Stephen Makenzie and Dr. Broadbent confirmed the views of Dr. Smith. With such authorities, perhaps, there will be a little more phlebotomy, at least in our Hospitals. But its use in private practice will be limited for a long time to come.—*Med. Rec.*

THE EMPLOYMENT OF ANILINE COLORS AS ANTISEPTICS.

Stilling (*Rev. gên. d'ophthal.*, April 30, 1890) has convinced himself that wounds and suppurating ulcers in and about the eye, treated with aniline, may be entirely sterilized by the solution penetrating everywhere, and the suppuration may be entirely arrested. When the pus is deep in the tissues, injections of the aniline solution should be employed, or the introduction of aniline crayons, or bathing with concentrated solutions. In many cases application of a powdered aniline is very efficacious. He has employed several of the methyl violets and one auramine. These aniline colors are destitute of all toxic action; they are very diffusible, and they do not coagulate albumen. It should not be forgotten that solutions of these aniline colors are soon decomposed by exposure to light, and they should therefore be kept protected.

GYNÆCOLOGY.

MENTAL ABERRATION DURING MENSTRUATION.

The following interesting study of the nervous derangements superinduced by erratic or disordered menstruation, is an extract from a paper read by Dr. Robert Barnes, the eminent English gynæcologist, at the opening meeting of the British Gynæcological Society:

"The phenomena accompanying the menstrual period are very numerous, and for the most part of a congestive nature, affecting various organs. In many cases the attack is entirely borne by the nervous system. This is the explanation of the periodical and temporary disturbances at the catamenial epoch. A young girl of nineteen, born of neurotic parents, of good general health, came into the hospital on account of trouble of this nature. Her menses had been regular, but at each return she became subject to spasms of asthma, and at the same time suffered from very severe uterine colic. Six months previously, in consequence of violent emotion, the menstrual period was suddenly arrested, and a state of insanity with hallucinations came on and continued for ten days. The mental disorder then completely disappeared, only, however, to be renewed at the next monthly epoch, and from that time the condition has been renewed at each corresponding period. The alienation is particularly characterized by an excessive loquacity, by agitation, partial vision, etc. There were no aggressive symptoms. An attack always lasted from eight to ten days, after which she became sane, but retained no recollection of her madness. Now, this is an important point; for a maniac who remembers nothing of his attack is much farther removed from cure than one who remembers its incidents, and can speak of them, especially if he can do so without blushing. In this patient there is an absolute coincidence between the menstrual period and the manifestation of insanity. The former pains, too, have completely disappeared, as if they had been a sort of counterbalance to the cerebral excitement. The origin of these attacks is to be found in a predisposition. Her father was subject to attacks of melancholia, and her mother was of a neuropathic constitution. A sister was a hystero-epileptic, while as to herself, she had been under an extreme mental strain at the time of the first outbreak.

"Most women experience during menstruation some morbid manifestation which is generally related to the nervous system. The most common disorder is migraine, which may be looked upon as the beginning of a slight cerebral excitation. But, besides this trouble, which is so common, eccentricities of character are sometimes developed, and may attain an extreme degree. In the hysterical, and especially the epileptic, attacks are often excited at this time. The most frequent mental disturbance takes the form of a modification of the natural disposition, which becomes quarrelsome and contradictory, and renders the patient a torment to the household. Terrible fits of jealousy are also often produced. In these the normal and intellectual disturbances

only hint at graver results. But numerous observations testify to the development of dipsomania, kleptomania, etc. Erotomania, likewise, is of frequent occurrence, and a case is on record in which the patient, in a state of extraordinary genital excitement, demanded to be led to a house of prostitution.

"The most serious of all these troubles is homicidal mania, of which a certain number of well-attested cases are known. Usually, however, the mania is generalized. It is mania properly so-called, and rages during the flux of blood. All these complications usually cease with or soon after the menstrual period. But occasionally, the victims become chronic maniacs. Melancholia is generally the form which the alienation assumes. This is especially seen in young girls at the appearance of the first menstruation. The perversions may afterward disappear.

"The prognosis of menstrual insanity is, indeed, comparatively favorable. It is necessary, however, to take into consideration a predisposition. With this exception, therapeusis is more effective than in other forms of insanity. Leeching and blistering may be of some use, but the principal reliance is to be placed upon the bromide of potassium, which is essentially a genital remedy. It is well to employ it in all the milder varieties of the disorder, which are always physiological, but which, nevertheless, are not without importance. Finally, when actual insanity is concerned, we must not forget that opium, morphine, atropine, and small doses of tartar emetic are very efficacious sedatives."—*St. Louis Cliniques.*

THE CURE OF UTERINE HÆMORRHAGE.

It is a very good working maxim for practical gynæcologists that when a woman suffers from uterine hæmorrhage the first thing to do is to explore the cavity of the uterus, dilating the cervix if necessary. There are plenty of cases on record in which one or other of the so-called "radical" operations has been performed where subsequent post-operative evidence has been afforded of the fact that the hæmorrhage might have been relieved by a much more simple and less dangerous procedure. For instance, a patient with multiple fibroids of the uterus floods repeatedly. The condition of the uterus having been diagnosed it is either removed *en bloc* or the tubes and their appurtenances are snipped off. Subsequently it is ascertained that the hæmorrhage was due to an undiagnosed, because unlooked-for, polypus of the uterus, and then both the operator and the patient are left to repent at leisure. Like every other rule, however, this one is subject to exceptions, but as these are exclusively of the mechanical order they only confirm the rule. We do not require to be told by a surgical luminary that when exploration of the uterus is for any reason impossible, that it should not be employed. It is evident that if the conditions be such as to forbid dilatation of the cervix, then it may be the duty of the surgeon to neglect this otherwise indispensable preliminary measure and proceed at once to the major operation, on the basis that the whole includes the part. Hysterectomy is a somewhat more serious operation than pulling out a tooth, but when it alone offers a chance of rescuing the patient from an exsanguineous grave, it must first be resorted to. There can be no two opinions as to the theoretical course to pursue, but, judging from the discussions at societies, there seems to be very considerable difference in practice.—*Med. Press.*

A HISTORY SHOWING THE HARM ELECTRICITY MAY DO IN UNSUITABLE CASES.

Dr. Skene Keith, in the *Edinburgh Med. Jour.* says:

It is a strange trait in human nature, that, whenever a new idea is brought forward it is, at first, either made too little or too much off. This has been the fate of Dr. Apostoli's method of the use of electricity in the treatment of disease; and the history of the following case is but one example of the harm which may result from the use of electricity in unsuitable cases. The value of this treatment in the symptomatic cure of fibroid tumors of the uterus is, in my opinion, a settled fact, though it is not yet accepted in conservative medical centres, like London and Paris; and if the inexpert would only stick to what is definitely known, and not begin experimenting on their own account, the unfortunate result to be recorded need not have happened.

In the month of August 1888, I saw a patient from the west of Scotland, 39 years of age, who had been suffering for almost three years from pain in both groins, down the legs, and in the back—all these symptoms being aggravated at the time of the monthly period. She had never been pregnant, and no history was obtainable as to the origin or commencement of the pains. The

general health was not in any way affected, and there did not appear to be very much suffering. On examination, the uterus was felt to be fairly normal, and on either side was found a rounded mass, presumably enlarged ovaries with more or less disease of the tubes.

Those swellings were somewhat moveable, and there did not appear to be many, if any, adhesions. Removal of the ovaries and tubes was therefore advised, if the patient thought herself ill enough to submit to an operation. This was at once declined, and the patient asked if electricity would not do her good. She was assured it would not cure her; and she was told that I believed that it would not only be of no service in her case, but would probably do more or less harm. Nothing was heard of her for nearly two years. She then came back looking a complete wreck. Until six months before, she had continued in much the same condition as when first seen. Then, still full of the idea that electricity would cure her, she sought further advice, and got the electricity she was so keen about. How it was administered I do not know; but that something must have been wrong is evident, from the fact that the applications caused very great pain, and sometimes, the patient stated, the sound was not passed into the uterus. The result is best described in her own words—"I thought that I had been ill for five years; but now I know that I have only been ill for six months."

Examination revealed a great change. The uterus, instead of being movable, was pushed up against the pubes by a tense swelling, which filled the whole of the pelvis and projected into the abdomen. A diagnosis of abscess of the ovary or Fallopian tube was made, partly from the examination, and partly because the patient had frequently feelings of chill and slight rigors; the pulse was quick, 120, and she looked like one with pus somewhere. Operation was now insisted on; it had ceased to be a matter for the patient to decide. Although it was explained that she ran great risk, she now at once consented; she was thankful to have the chance of relief offered by operation.

The operation was performed in June 1890. All of the pelvic tissues were matted together, and, in addition, the broad ligament was open up to below the level of the cervix. Two accidents occurred,—first I ruptured the sac when the enucleation was almost finished, the putrid pus at once filling the pelvis; and then, in separating adhesions deep down in the pelvis, I opened the bladder.

This would probable not have happened had the sac remained intact, but the matter together with all the pelvic structures was so dense, that when the sac was flaccid it was extremely difficult to make out its relations, and the bladder tore like a piece of wet blotting paper. There was thus a great mess to clean up, and this was done by washing out with warm water. It has not been necessary for me to do this as often as once in over seventy cases, three times in all; and it is more than doubtful if the method is necessary for the expert operator, who is, at the same time, careful. Naturally, one must wash out if there has been a rupture before operation, and putrid matter has been able to reach the peritoneal cavity, as happened in a case of ovariotomy performed by Dr. Keith last year, where a suppuration dermoid had ruptured twenty hours before operation. In such a case, washing out may fairly be said to have saved the patient's life; but it is only, in my opinion, in a case of this nature, or where the peritoneum has been infected at the time of operation, that it is of use. Washing out seems to be often used without judgment, and I see that Mr. Thornton seems to agree with me that it is not often necessary.

The bladder opening was sewn up with fine silk, and after the right ovary had been removed and a number of bleeding vessels tied, the wound was closed, a drainage-tube being left in. The patient was put back to bed after an hour's operation with a wretched, shabby pulse of 144.

On examining the specimen it was impossible to say whether the original site of the disease had been in the ovary or tube. From the time the patient was put back to bed until her death at the end of sixty hours, there was not any sign of improvement. The pulse became quicker and quicker; and she died simply from the injury inflicted on a woman in a greatly debilitated state of health. There were not any abdominal symptoms; no distension nor sickness, and the urine which was drawn off every two hours was abundant. It is interesting to note how anxious the patient was to avoid any mutilation until it became absolutely necessary for her to do so, and then only consented with the hope of saving her life.

For winter cough of the aged—pure terebene, ten drops on sugar, or in emulsion with other remedies as indicated, is good treatment.

OBSTETRICS.

METRORRHAGIA: SHOULD THIRST BE QUENCHED?

G. Jorissenne, M. D. (*Archives de Tocologie,*) combats the principle of allowing plenty of drinking water to patients exhausted by flooding, whether after labor or in fibroid disease. The practice is advocated on physical and therapeutic grounds. Yet its defenders admit that there is diminution of the plasticity of the blood in these cases, and administer steel and other remedies in order to increase that plasticity. The absorption of quantities of water into the circulation must have the opposite effect. Dr. Jorissenne maintains that the patient should not be permitted to drink freely. Slices of sugared lemon or acidulated drops should be administered in order to quench thirst. The patient, he adds, should be kept in the recumbent posture, with the arms raised; from time to time ammonia may be inhaled. This treatment is especially advisable in women subject to deficiency of colored blood corpuscles. Eighteen years ago Dr. Jorissenne tried his line of treatment on a woman of fifty-three, who was dying from hæmorrhage after abortion at the third month. She was a stout, anæmic multipara, of violent temper. There was difficulty in removing the placenta, and both plugging and astringent intra-uterine injections failed to check the bleeding. The patient fell into a desperate condition. Dr. Jorissenne noticed that she was continually drinking tumblerfuls of cold water. Considering that the source of hæmorrhage was being fed, he strictly forbade all drinks, raised the arms, rubbed the lips with vinegar and lime-juice, gave the patient ammonia to inhale, and plugged the uterus again. No drink was allowed for three hours. The patient then rallied and recovered, and is now alive, a healthy old woman. He was successful in two other cases of flooding; one after abortion, between the second and third month; the second after a lingering labor, mismanaged by an ignorant midwife. These cases were less serious than that above described, but Dr. Jorissenne was able to commence his treatment much earlier. He admits that in very plethoric patients this dry treatment of flooding might be harmful if too rigidly enforced.—*Archives of Gyn.*

ACUTE TORSION OF OVARIAN PEDICLE.

Dr. Mackenrodt (*Centralb. f. Gynäk.,* March 28th, 1891) describes the case of a patient, aged 38, who had been seized on December 16th, 1890, with sudden increase of abdominal pain, from which she had suffered for years. Her abdomen had recently grown larger. On December 17th fæcal vomiting came on, and became frequent on the next day; neither fæces nor flatus passed from the anus. On the 20th, when she was admitted into Dr. Martin's institution in Berlin, she was collapsed and jaundiced; the temperature was normal, the pulse small and frequent. The uterus was pressed against the symphysis by a tumor which reached to above the naval. The abdomen was distended and tender. The legs and abdominal integuments were œdematous. On December 21st abdominal section was performed. A deeply congested ovarian tumor, strangulated by torsion of its pedicle, was found and removed. The entire surface of the peritoneum in the hypogastric and pelvic regions was dark blue from congestion. As there were no adhesions the operation was not difficult. The pedicle, about 2 inches broad, was twisted one turn and a half around its axis. Recovery was rapid. It is remarkable that, notwithstanding the severe symptoms of strangulation and peritonitis, there was no rise in temperature, yet the pulse was much affected. The tumor was a dermoid ovarian cyst; and free hæmorrhage into its cavity had occurred.—*Brit. Med. Jour.*

VELAMENTOUS INSERTION OF THE CORD.

Dr. Addison Foster (*American Journal of Obstet.,* April, 1891) read notes of a case of this complication before a recent meeting of the Gynæcological Society of Chicago. The patient, aged 26, had a lingering and painful but otherwise natural labor. The child was delivered with considerable flooding, and was blanched. The flooding continued till the expulsion of the placenta, which took place without any difficulty. The umbilical cord entered the membranes opposite the placenta, and, dividing and spreading, passed to the edge of that structure, where it divided still more into branches, which ran over the placental surface. One large vein, about 4 inches from the margin of the placenta, was ruptured. Dr. Foster believed that it was the seat of hæmorrhage. Dr. Jaggard, in discussing this specimen, pointed out that the case was typical; the cord was inserted into the chorion at the pole of the ovum opposite to the placenta. The anomaly did not appear to affect the development of the child or the course of the labor.—*Brit. Med. Jour.*

PÆDIATRICS.

EXTENSIVE POST-DIPHTHERITIC PARALYSIS.

Drs. Torras and Passual, in the *Siglo Medico*, August 10, 1890, report the following case of extensive post-diphtheritic paralysis:

A child, male, 4½ years old, which, from the statements of the mother, undoubtedly had passed through an attack of laryngeal diphtheria, presented itself at the Hospital. There was paralysis of the velum paliti; the voice was nasal; food and liquids were regurgitated through the nose. The lower limbs were paralyzed; their muscles were paralytic and flaccid, and the child was unable to stand. Syrup of proto-iodide of iron was prescribed, and as nourishing food as possible ordered to be given, and the mother was told that the symptoms would disappear gradually in the course of a few weeks. But this prognosis, instead of being confirmed, was followed by the development of a grave bronchitis, pointing to an affection of the bronchial muscle-fibres. The patient coughed, and could only with difficulty raise the profuse sputa. An expectorant was prescribed, and as constipation had been existing for two days, which would seem to indicate an implication of the muscular tunic of the intestines, an infusion of senna was administered, and a rectal injection of soap and water was ordered. This caused the expulsion of several fæcal masses and a diminution in the size of the distended abdomen. As the lung symptoms diminished in severity, tincture of nux vomica, in combination with ergotine, was given in increasing doses. After continuing these remedies for several days, the motility of the affected muscles returned; the thoracic and abdominal symptoms also disappeared quite promptly; the child's appetite improved, and in ten or twelve days he was able to stand. The voice lost its nasal sound; deglutition became easy and quite normal. The remedies were continued for some time after the disappearance of all the symptoms. The writers would regard mux vomica and ergotine as powerful agents in such conditions.— *Jour. Nerv. Ment. Dis.*

DRAINAGE OF THE VENTRICLES OF THE BRAIN FOR HYDROCEPHALUS.

Dr. Brocas reports two cases of chronic hydrocephalus treated by this procedure. In the first one Dr. Thiriar, of Brussels, performed trephining, with puncture of the ventricle and drainage. Death occurred on the sixth day. The second case which was operated upon by Dr. Brocas was that of a boy, three years of age, who had suffered from convulsions since the seventh month. The attacks increased in frequency and were attended with an increase of volume of the head. A year ago right hemiplegia developed after a severe attack. The right upper extremity was in a position of flexion, the fingers could not be moved; this condition gradually improved, although the right hand remained stiff. Eight months later, three months before operation, convulsions again occurred, and were followed by hemiplegia of the left side. The condition of the affected lower extremity improved, but a contracture of the upper extremity persisted. After puncture of the ventricles and drainage the contracture disappeared completely, and the child recovered promptly.—*Wiener Medizin Wochenschr.*, No. 16, 1891.

FŒTAL ENDOCARDITIS.

Drs. Porak and Bernheim (*Bull. et Mém. de la Soc. Obstét. et Gynéc de Paris*, No. 4, April, 1891) exhibited specimens illustrating fœtal endocarditis. A fine male child, the third that its mother had borne, was safely delivered at term. Three days after birth it became jaundiced. On the fourth day it was occasionally cyanosed, but nothing could be detected on auscultation. On the fifth there was dyspnœa, with dullness over different parts of the lungs, and moist *rales*. Next day the infant died. Large areas of red hepatisation were found in both lungs. The left ventricle was found extensively diseased, the mitral valve destroyed by endocarditis, the aortic valves thinned and fused, so that they formed a simple diaphragm with a central aperture. The aortic orifice and the aorta itself were narrow. The foramen ovale was patent, and allowed of a certain amount of compensation, nevertheless the obstruction to circulation was great, as the frequent, though intermittent, cyanosis proved. The hepatisation of the lungs was attributed to the impairment of the functions of the left heart, and the dilatation of the right chambers (otherwise normal) was the result of the obstruction to the pulmonary circulation caused by the disease on the left side. Haranger has distinguished three varieties of right endocarditis in the fœtus. In the first form the aortic orifice becomes closed; in the second it is not so affected; and in the third the endocarditis is confined to the mitral valve.—*Brit. Med. Jour.*

HYGIENE.

AN EARLY PROOF OF THE VALUE OF VACCINATION.

A correspondent of the *British Medical Journal* sends to it the following extract from a French newspaper of October 3, 1804: "Six black children, the first who had ever been vaccinated at the island of Réunion, and from whom 5,000 people were vaccinated, were shipped on board the vessel Jeune Caroline, bound for one of the Seychelles Islands to perform quarantine for small-pox. The six children were three months on board the ship, eating, drinking, and sleeping with the sick; during the time of quarantine they were inoculated with the virus taken from the pustules of the diseased passengers, by large incisions made on both arms. From the report made at the time and communicated to the Central Society of Vaccine by the Minister of the Home Department, it was found that, although these six children had slept under the same blankets, and in contact with the pustules of the sick, eating and drinking out of the same vessels, and having been inoculated with pus from the patients who ultimately died of the disease, they were all preserved from the contagion, and were during the whole time in perfect health. The proof and counter-proof is one of the most severe tests ever performed, and ought to have a marked place in the history of vaccination. The fact of six children having lived in perfect health on board a small ship infected with small-pox, having on board twenty blacks with confluent small-pox—six of whom died—twenty to twenty-five others with dry crusts all over the body, with seven deaths before their arrival at the quarantine station, all packed in a small space between decks, is perhaps the most crucial test ever witnessed of preservation by vaccination."

MILK AND DIPHTHERIA.

E. Klein (*Nineteenth Annual Report of the Local Government Board*, 1889–90, p. 167) inoculated two milch cows (both of which had calved three or four weeks, and then had been kept under observation for a week or ten days) with a broth culture of the bacillus diphtheria derived directly from human diphtheria membrane, which had been incubated for three days at 37° C. On the third day he found at the seat of inoculation (under the skin of the left shoulder) a swelling containing clear sanguineous serum; this was preceded by a temporary rise of temperature. On the fourth day a small group of vesicles occurred on one teat, and on the udder near to it. On the succeeding days these vesicles lost the clear vesicular appearance, became purulent, and the centre became dark, whilst at other stages they were covered with brown crusts. Around each was distinct nodular induration of the skin, and each was placed on a raised injected corium. On removal of the crusts an ulcer covered with a purulent film was left. The pustules and ulcers varied in size from $\frac{1}{8}$ inch to $\frac{1}{2}$ inch or more in diameter; most of them were on the udder between the hind teats, but some were on the outer surface of the udder near to the base of the teats; they still continued to appear on the eighth day. The most marked feature about these was that they ran their course in from six to eight days. In the lymph of these vesicles and pustules Klein succeeded in demonstrating the bacillus diphtheria, both under the microscope and in the culture tube. With milk taken from these cows cultures were also obtained, though not in large numbers. If the milk was allowed to stand at a temperature of from 19° to 20° C. the organism was found in enormously increased numbers. One of the cows died on the fifteenth day, the other was killed on the twenty-fourth, when marked *post-mortem* changes were found: necrosis and œdema at the point of inoculation, enlargement of the lymph glands, pneumonia, enlarged spleen, necrotic patches in the liver, and fatty degenerative changes in the kidney. Organisms were found only at the point of inoculation. Calves inoculated with scrapings of the eruption of the cow developed similar symptoms, but no vesicles were formed. Cats fed on milk from the affected cows died with typical diphtheria, and communicated the disease to other cats placed in the same room, typical diphtheria bacilli being found in the diphtheritic membranes of these animals. The last experiment was not specially arranged, and thus loses and gains in value as it is considered from different points.—*Brit. Med. Jour.*

MICRO-ORGANISMS OF YELLOW FEVER.

Professor Domingo Freire, of Rio de Janeiro (*Deutsch. med. Woch.*, No. 17, 1891), maintains that there can be little doubt that bacteria play a most important part in the causation of certain specific diseases, but that along with bacteria there are accessory factors that must always be taken into

account. In yellow fever, which is undoubtedly of bacterial origin, we have an admirable example of the necessity that there is for the presence of the various factors for the production of the disease. It is a disease which is found only in hot climates, and there only in patients who, from altered conditions of the gastric juice and blood or tissue juices, offer suitable media in which the specific organisms can flourish. The organism found in yellow fever is rounded, single, or in little masses of chains; it is usually stained with fuchsine, methyl violet, and cherry red; it grows readily in peptonized agar, beef-jelly, and broth—on the agar especially, prominent growth appearing on the surface. The colonies, at first white, become yellow, then grey, and even black; the organism separates out two distinct pigments, one of them yellow, soluble, and easily diffusible into the tissues, giving rise to the characteristic color to which the disease owes its name; the other black, insoluble, and very frequently met with in vomited matter (black vomit). Toxic ptomaines may be separated from cultures, and these, when injected into frogs and rabbits, produce typical bulbar symptoms, the poison acting especially on the sympathetic and pneumo-gastric nerves. Injections of blood from a yellow fever patient, or of pure cultures of the organism, produce all the characteristic symptoms of the disease in guinea pigs. Professor Freire, as is well known, finds that a cultivation through several generations so interferes with the virulence of the organism that it serves as a protective vaccine, setting up all the symptoms of a modified yellow fever, to which the patient does not usually succumb, and which protects him from further attacks of this malignant disease. From 1883 to 1890 there have occurred five epidemics—1883, 1884, 1885, 1888, 1889—during which no fewer than 10,885 people have been inoculated, with a very small death-rate. As the result of Professor Freire's work, a special institute supported by Government was opened in December, 1890; this is to be devoted to the preparation of the yellow fever vaccine. Patients have now, in consequence of the success of the treatment lost all fear of being vaccinated.—*Brit. Med. Jour.*

THE PROPER HOURS OF SLEEP.

The *Lancet*, July 11, 1891, says that the necessity of devoting to sleep several hours in each day is too obvious to admit of serious question. The proper selection of these hours is also, for those who would prolong and usefully employ life, a very needful consideration, though its importance may to some be less evident. We have all met with persons, outside of hospitals and of Parliament, who do half or more of their daily work after nightfall, and sleep long after earlier rising men are awake and busy. Some of these are wont to extol the comfort of their morning slumbers. They describe as immense, the refreshment they receive from six or seven hours thus agreeably spent, and no wonder, for the sense of present satisfaction must be very marked, and that for definite reasons. Man, in common with most of the animal creation, has accepted the plain suggestion of Nature that the approach of night should imply a cessation of effort. If he ignores this principle his work is done against inherited habit, and, so far, with additional fatigue. It follows, too, from our ordinary social conditions, that he must use artificial light, and sustain its combustion at the cost of his own atmosphere. Naturally, therefore, when he does rest his relief is in proportion to his weariness. As in many other cases, however, sensation is not here the most reliable guide to judicious practice. Established custom affords a far truer indication of the method most compatible with healthy existence. The case of the overworked and the invalid lends but a deceptive color to the argument of the daylight sleeper. In them excessive waste of tissue must be made good, and sleep, always too scanty, is at any time useful for this purpose. For the healthy majority, however, the old custom of early rest and early waking is certain to prove in future, as returns of longevity and common experience alike show that it has proved in the past, most conducive to healthy and active life.

ARE WE TOO CLEAN?

In a paragraph under the above heading the *British Medical Journal*, July 11, 1891, says that not many years ago European civilization was in an optimistic phase, and people went about saying that, what with railways, steamers and telegraphs, we might thank heaven that we were born in the nineteenth century. Satiety, dis-illusion, and the increase of the population have thrown a gloom over these old and happy notions. Thoughtful people wish to know if we are really better than our ancestors. One positive fact is ascertained—we are certainly

cleaner. It is difficult to say that anybody can be too clean, but it is easy to understand that a man can clean himself in the wrong way. Dr. M. Ricketts has discovered a skin affection almost peculiar to women who wash and powder too frequently. There is redness, with scaliness and considerable burning. Exposure to draughts increases the symptoms. At times there is pain, causing loss of sleep. The zeal of some American ladies in the practice of the virtue which is next to godliness is marvellous. One is said to have confessed to having applied a well-known cosmetic powder thirteen times in twelve hours, each time after the face had been thoroughly washed with a yet more famous soap. Dr. Ricketts prefers good pure olive oil from the south of France, applied two or three times a day with some soft silk or linen fabric, to the blandest soap. We feel no surprise at the above information as to the evil effects of too much soap. There is such a thing as using too much water, especially if cold or very hot. In our profession frequent washing of the hands is an absolute duty and necessity; yet how well we know that chaps once formed are aggravated by washing, and that glycerine often irritates the hand which it whitens. The roughening of the hand by frequent ablutions is a grave matter, as it diminishes tactile sensibility and is very disagreeable to patients. Thorough drying of the hands after the use of tepid water and a bland soap is the surest way to keep them clean without inducing conditions which cause them to become dirty again with rapidity. As for the cold bath, its dangers are well known. The middle-aged man must beware of it; nor feel ashamed to mingle with its flood half or more of the contents of his shaving-water jug. Otherwise he runs as much risk as he entails on his constitution by violent athletic contests with men twenty years younger than himself, if not more risk, as he always has to find time for his toilet, though his pursuits may keep him from frequent indulgence in sports.

MEDICAL CHEMISTRY.

INCOMPATIBLES OF ANTIPYRINE.

According to Millard and Campbell, the following substances produce precipitates when added to aqueous solutions of antipyrin:

Carbolic acid in saturated solution,
Tannin, (a white insoluble precipitate),
Mercuric chloride, (a white precipitate, soluble in an excess of water),
Infusion catechu,
Infusion cinchona-bark,
Infusion rose-leaves,
Infusion uva ursi,
Solution of extract cinchona-bark,
Tincture catechu,
Tincture cinchona,
Tincture hammamelis,
Tincture iodine, (a precipitate soluble in water),
Tincture kino,
Tincture rhubarb.

The following substances produce coloration when added to aqueous solutions of antipyrin:

Hydrocyanic acid, dilute solution,.....yellow,
Niric acid, dilute solution,.....weak yellow,
Ammonia-alum, dilute solution, dark yellow,
Amyl nitrate, acid solution,.....green,
Nitrous ether, alcoholic solution,.....green,
Copper sulphate,.....green,
Ferrous sulphate,.....yellow-brown,
Ferric sulphate,.....blood-red,
Ferric chloride,.....blood-red,
Syrup iodide iron,.....red-brown.
—*Weekly Med. Rev.*

THE IDENTIFICATION OF TRACES OF ALBUMEN IN URINE CONTAINING BACTERIA.

Adolf Jolles (*Zeitsch. f. Analyt. Chem.*, 29, 407 ; *Ber. Deut. Chem. Ges.* 23, 707,) says that by shaking the urine with "kieselguhr" (diatomatous earth) and then filtering, that the albumen can easily be identified in the filtrate by means of acetic acid and potassium ferrocyanide. In case any albumen remains on the filter, the precipitate is washed with warm caustic potash solution, and the alkaline filtrate acidified with acetic acid and tested with ferrocyanide. (We must not forget that the acetic acid and potassium ferrocyanide test is not an absolutely certain one, as *mucin* as well as albumen is precipitated by it.) The treatment of the kieselguhr on the filter with warm potassium hydroxide solution is of questionable value, as we do not know whether the caustic solution has any solvent action on the bacteria themselves.

THE VALUATION OF MEAT PEPTONES.

An important discrepancy in the method adopted by chemists for the analysis of peptones is pointed out by M. A. Denæyer in a pamphlet of recent issue. In the well

known König process no regard is paid to the determination of gelatine, which it appears is a common constituent of commercial peptone of meat; and as sulphate of ammonia is used for the precipitation of albumose (gelatine being precipitated by the same reagent), the proportion of albumose-peptone is exaggerated. If, as the author states, gelatine enters largely into the composition of many of the preparations in commerce, it becomes a matter of fundamental importance to be able to determine the amount of this body, inasmuch as it is said to present the nutritive value of neither the albumens nor their peptones. The process now published by M. Denæyer admits of the estimation of all three bodies—viz: gelatine, albumose, and peptone. The following is a *résumé* of the method which he adopts. Two grammes of dry peptone in 10 cubic centimetres of water are treated with 90 cc. of 90 per cent. alcohol. The alcohol precipitates the albumose, peptone, and normal jellifiable gelatine, while it takes up the salts and extractive bases and allotropic injellifiable gelatine. The coagulum obtained by alcohol is then dissolved in hot water, any residue of albumens which have been rendered permanently insoluble by the alcohol being filtered off and weighed. To the dissolved portion, which is carefully neutralized, an excess of saturated solution of bichloride of mercury is added. This reagent throws down albumose and peptone, the gelatine remaining in solution. After filtration the clear solution may be freed from mercury by means of sulphuretted hydrogen. It is then filtered, and the gelatine, after concentration of the fluid, precipitated by a saturated solution of ammonium sulphate. On raising the mixture to boiling, the gelatine firmly adheres to the sides of the vessel. It may be washed quickly with cold water and weighed; the weight of the vessel and the entangled sulphate of ammonium being deducted, the amount or normal jellifiable gelatine is given. The quantity of adherent ammonium sulphate is determined by dissolving the coagulum in warm water and triturating with a standard solution of barium chloride. The weight of gelatine so obtained is deducted from the weight of the precipitate given by adding saturated ammonium sulphate directly (as in the König process) to a fresh solution of the alcohol coagulum. As ammonium sulphate precipitates both gelatine and albumose, this last difference gives the albumose. For the estimation of peptone proper two grammes of peptone, freed in the same way from insoluble albumens and extractives, are treated with a solution of acid phosphotungstate of soda, which precipitates the normal gelatine, the albumose, and the peptone. The precipitate is collected on a tarred ashless filter, washed well with water containing hydrochloric acid, dried, and weighed. It is then ignited in a muffle until complete incineration is effected. The weight of the residue and that of the filter are deducted from that of the dry precipitate. This gives the gelatine, albumose, and peptone. On deducting the amount of gelatine and albumose the weight of peptone is gained. The alcohol employed for the precipitation of the albumens and peptones is divided into two portions—one in which allotropic injellifiable gelatine is estimated by evaporating to dryness, taking up with water and treating with ammonium sulphate in the manner already indicated; the other portion is evaporated, and the residue dried to constant weight. From this is deducted the weight of gelatine (injellifiable), and the amount of creatine and salts is arrived at by difference. The process is evidently based on accurate and painstaking observations, and it certainly seems to promise in the hands of careful operators a means for the satisfactory separation and estimation of albumose, peptone, and gelatine. This last body, the author states, whether normal or injellifiable, is not identical, chemically or physiologically, with peptone or albumose, in that it has a greater percentage of nitrogen, and, unlike them, is not organically assimilable. It is therefore desirable to know the proportion of gelatine contained in preparations of this kind, seeing that they are largely advocated and employed as nutrients in the treatment of disease associated with enfeebled powers of assimilation and digestion. M. Denæyer appears to have been one of the first to recognize the presence of gelatine in meat peptones, and his process will in all probability prove a contribution of no little importance to the analytical domain of chemical science.—*Lancet.*

THE CHEMISTRY AND TOXICOLOGY OF THE TUBERCLE BACILLUS.

Weyl (*Deutsche med. Wochenschrift*, 1891) examined, at the Hygienic Institute at Berlin, the product obtained by treating with dilute sodic hydrate, the scrapings from 600 glycerin-agar cultures of the tubercle bacillus. The yellowish turbid mixture coagulated, by gradual cooling, into two layers—an upper, resembling coagulated agar, and a lower, containing small, white shreds. The lower

layer, after treatment with warm dilute sodic hydrate, consisted, microscopically, of folded membranes, and at irregular intervals of apparent, inflated tubes. It contained carbon, hydrogen, sulphur and nitrogen. Special interest attached to it because it displayed the specific staining qualities of the tubercle bacillus. This "white substance" probably represents the capsule of the bacillus, while the gelatinous substance of the upper layer represents the protoplasm of the organism. Analysis of this gelatinous substance places it among the mucins. Solutions of it were prepared and injected subcutaneously into rabbits, guinea-pigs and mice. In the guinea-pigs and mice, at the end of three or four days, local necrosis took place at the site of injection and a crust formed, which fell off in four or five days. From these experiments Weyl concludes that from cultures of tubercle bacilli a toxomucin can be obtained, which he does not believe to exist preformed in the bacilli. —*Amer. Jour. Med. Sci.*

A TEST FOR ACETONE IN EXPIRED AIR.

The presence of acetone in the breath is generally detected by its special odor, which is compared by various authors to that of wine, chloroform, ether, etc. No recent publications, however, describe any method for the chemical demonstration of its presence. Professor De Renzi (*Riforma Medica*, April 25th, 1891)gives a simple methed of estimating qualitatively, and to some extent quantitatively, the amount of acetone contained in the aqueous vapor condensed from expired air. His apparatus is very simple—a small thin-walled bottle fitted with an india-rubber cork through which pass two tubes. This bottle is placed either on ice or in a freezing mixture, and the patient allows the expired air to pass into it through one of the tubes. A few minutes are sufficient to collect enough liquid for examination. The test applied is that of Lieben, which consists in the formation of iodoform by treating the liquid with caustic potash and solution of iodine in potassium iodide. If the precipitate be heated on a water bath the iodoform will be volatilized and be deposited in crystalline form on the cool parts of the apparatus. A solution which contains only 0.01 milligramme of acetone will give the precipitate of iodoform in from one to three minutes. A stronger solution will give the reaction immediately on adding the reagents. It will be easily seen that the same method may be made to yield quantitative results. In order to estimate acetone in the urine, it is necessary to distil off the aqueous portion, as the reaction will not take place in presence of the urinary salts. This operation is both tedious and unpleasant, and the author is of opinion that examination of the breath as above described will be sufficient, in a case of acetonæmia, to detect the presence of acetone. He has found, too, that in slight cases it is possible to obtain the iodoform reaction from the breath, when examination of the urine yields only a negative result. It may be mentioned, in conclusion, that the breath in health never contains acetone, and application of the test will not give the faintest trace of iodoform.—*Brit. Med. Jour.*

News and Miscellany.

THE SECOND TRIENNIAL SESSION OF THE CONGRESS OF AMERICAN PHYSICIANS AND SURGEONS.

Washington, D. C., June 24, 1891.

Circular No. 1:

The Committee of Arrangements takes great pleasure in announcing to the members and invited guests that the arrangements are sufficiently advanced to assure the success of the Second Triennial Session of the Congress of American Physicians and Surgeons, which will be held in this city during the 22d, 23d, 24th, and 25th of September, 1891.

A number of distinguished physicians and surgeons from abroad have accepted the invitation to attend, among whom may be named Mr. Thomas Bryant, Mr. B. E. Broadhurst, Mr. A. E. Durham, Mr. Reginald Harrison, Surgeon General Sir W. E. McKennin, Mr. U. Pritchard, Mr. F. Treves, Sir William MacCormac, and Drs. James G. Glover and William M. Ord, of London, England; Drs. McCall Anderson and W. T. Gairdner, of Glasgow; Mr. E. H. Bennett and Professor J. J. Cunningham, of Dublin; Professor John Chiene and Dr. J. Battey Tuke, of Edinburgh; Professor H. Krause and Dr. F. Beeby, of Berlin; Professor Curschmann, of Leipzig; Professor Hoffa, of Wurzburg; Professor Kuhne, of Heidelburg; M. Emil Juval, M. E. Landolt, and Dr. Pozzi, of Paris; Dr. A. Musso, of Turin; Dr. Von Mozengeil, of Bonn; Dr. Lowenber, of Paris; and Dr. Rafail Lavista, of Mexico.

The sessions of the Congress will be held in the Main Hall of the Grand Army

Building, 1412 and 1414 Pennsylvania Avenue, from 3 to 6 P. M., daily.

The President's Address will be delivered in the Lecture Hall of the National Museum, Wednesday, September 23d, at 8 P. M., followed by the Reception of the President, from 9.30 till 12. Order of Executive Committee. The Army Medical Museum will be open the same evening.

The sessions of the Societies will be held according to the programmes of each, respectively, in the places as follows:

American Surgical Association, Main Hall, Grand Army Building, 1412 and 1414 Pa. Ave.

Association of American Physicians, Hall No. 1, Grand Army Building, 1412 and 1414 Pa. Ave.

American Climatological Association, Hall No. 2, Grand Army Building, 1412 and 1414 Pa. Ave.

American Gynæcological Society, Lecture Hall, Columbian University, 15th and H Sts. N.W.

American Laryngological Association, Parlor A, Arlington Hotel.

American Neurological Association, Parlors 182 and 183, Arlington Hotel.

American Orthopedic Association, New Reception Room, Arlington Hotel.

American Otological Society, Ladies' Parlor, No. 1, Arlington Hotel.

American Ophthalmological Society, Ladies' Parlor, No. 2, Arlington Hotel.

American Physiological Society, Parlor 181, Arlington Hotel.

The officers of the American Dermatological Association and the American Association of Andrology and Syphilology have made their arrangements with the Shoreham for places of meeting.

Office of Registration, Parlors 1 and 2, Arlington Hotel. From this office the mail of members and guests will be distributed, and the city residence of each member or guest can be ascertained.

The Association of American Anatomists will meet in this city during the sessions of the Congress, and will occupy Hall No. 3, Grand Army Building. The American Pædiatric Society will meet here September 23d and 24th, in the Lecture Hall of Columbian University, 15th and H Streets N.W.

The Congress will be composed of the members of the constituent societies and invited guests.

A registration fee of five dollars will be required of every member of the constituent societies who may register; invited guests will not pay the fee. Order of Executive Committee.

Participating societies can "accredit visitors to the Congress, who shall pay the registration fee, but shall not be privileged to participate in the deliberation of the Congress." Order of Executive Committee.

A copy of the transaction of the Congress will be sent to each person who may register.

Only those who may register, invited guests, and ladies accompanying them will be admitted to the Reception of the President.

Secretaries of constituent societies are requested to supply this Committee with the names and addresses of "accredited visitors."

The evenings of Tuesday, September 22d, and Thursday, September 24th, are left to the societies.

Members of the American Surgical Association and of the Association of American Physicians will conjointly entertain their foreign guests at dinner at the Arlington Hotel, Thursday, September 24th, at 8 P. M.

The American Gynæcological Society has also arranged for a dinner at the Arlington Hotel, Thursday evening, September 24th. The American Pædiatric Society give a dinner 24th September.

Other societies that intend to entertain their foreign guests are requested to communicate with this Committee.

Arrangements are in progress to secure reduction of railway fares. As soon as completed, the information will be communicated to each member and "accredited visitor."

The Arlington Hotel offers accommodations at the rate of four dollars per day, and the Hotel Arno offers rates "on the American plan at $3 and $4 per day, on the European plan, $1 each per day. Exclusive use of bath, $1 extra."

A blank certificate of registration will be sent to each member and "accredited visitor." The Committee requests each person receiving such certificate to fill the blanks and return it, with the fee, to Dr. John S. Billings, Treasurer of the Congress.

The American Pomological Society, and perhaps other societies, will meet in this city September 22–25. The Committee therefore suggest to the members an early arrangement for hotel accommodations.

Inquiries relating to railway fares must be addressed to Dr. S. S. Adams, 1632 K St.

A complete roster of membership of the Congress has been prepared, with post-office address and society to which each member belongs.

The Committee will take pleasure in answering any inquiry relating to the local arrangements of the Congress.

Samuel C. Busey, M. D., *Chairman*,
1545 I Street N.W.
John S. Billings, M. D.,
Army Medical Museum.
W. W. Johnston, M. D.,
1603 K St. N.W., Washington, D. C.
R. T. Edes, M. D.,
1214 18th St. N.W., Washington, D. C.
S. O. Richey, M. D.,
732 17th St. N.W., Washington, D. C.
J. Taber Johnson, M. D.,
1728 K St. N.W., Washington, D. C.
I. E. Atkinson, M. D.,
605 Cathedral St., Baltimore, Md.
C. F. Bevan, M. D.,
807 Cathedral St., Baltimore, Md.
Samuel Johnson, M. D.,
204 Monument St., Baltimore, Md.
Samuel Theobald, M. D.,
304 Monument St., Baltimore, Md.
H. Newell Martin, M. D.,
Johns Hopkins Hospital, Baltimore, Md.
D. Forest Willard, M. D.,
1818 Chestnut St., Philadelphia, Pa.

GYNÆCOLOGY IN SPAIN.

On February 23d of the present year, the Spanish Gynæcological Society appointed a committee consisting of Drs. G. Alarcon, E. Gutiérrez, A. Cospedal, and F. de Cortejarena, to consider the advisability of establishing a gynæcological institute in Madrid. This committee has now reported that the creation of such an institution is urgently needed, not only in the capital, but in each of the provinces, as at present next to no provision is made in Spain for the treatment of women suffering from diseases peculiar to their sex. In the Madrid hospitals there are only a very few beds for such cases, and elsewhere things are even worse. The Committee recommend that a fully equipped gynæcological institute be forthwith established in Madrid with competent teachers and special courses of instruction, not only in gynæcology, but in the anatomy, physiology, and hygiene of the female sex, obstetric operations, gynæcological surgery, etc. The building should be constructed to accommodate not more than seventy or eighty beds; the obstetrical and gynæcological departments should be kept separate from each other, and all the arrangements should be in accordance with the most advanced hygienic principles. The institute should stand in an isolated position surrounded by gardens.—*Ex.*

CREMATION IN ARGENTINA.

Cremation seems to have acquired a sure foothold in the Argentine Republic. Since 1886 the total number of cremations carried out there has been 6,789; in 1890 alone they amounted to 2,085. A law exists in Argentina to the effect that the bodies of all persons dying of infectious diseases and the fragments that remain of corpses that have been dissected must be burnt.—*Ex.*

SAHARA AS A HEALTH RESORT.

It is reported that European invalids and other persons in search of quiet and a mild climate for winter are beginning to turn their attention to the oases on the northern border of the great Sahara, where the climate is very equable. Railway communication through Algeria makes these places less inaccessible than formerly.—*Ex.*

THE DOCTOR'S EARNINGS.

According to Dr. Jarvis' tables, the average of the lives of physicians is fifty-six years. If you begin practice at twenty-four, your active life prospect will be thirty-two years, and from a thousand to fifteen hundred dollars will represent your average yearly income. Now, were you (through God's mercy) to practice these thirty-two years without losing a single day, and collect (say) eight dollars every day of the time, you would receive but $93,440. Deduct from that amount your expenses for yourself and your family, your horses, carriages, books, periodicals, and instruments; your taxes, insurance, and a multitude of other items for the whole thirty-two years (11,680 days), and then, so far from being rich—you would have but little, very little, left to support you after you naturally reach the downhill of life, or are broken down in health, and faculties deteriorated, and in need of a physician yourself, through worry, anxiety, and fatigue, in the discharge of your duty.—*Kansas Med. Journal.*

ROYAL COLLEGE OF PHYSICIANS OF LONDON.

An extraordinary comitia of the College was held on Tuesday, June 16th. Sir Andrew Clark, Bart., M. D., president in the chair.

The Censors' Board nominated Dr. Pye-Smith Lumleian Lecturer for the ensuing year, and Dr. Sidney Martin, Goulstonian Lecturer. A communication was read from the Secretary of State for War promising the promulgation of a Royal Warrant in respect of the Army Medical Department, as already notified in our columns. The President observed that it could not be said that the College was unable to exert any public influence, as since it had first moved in the matter every demand that had been put forward had been granted save one, and that was the formation of an Army Medical Corps, which, being very costly, would necessarily take some time.

On the motion of the Senior Censor, it was resolved that the Council of the College might confer with others than fellows of the College on the question of the five-years curriculum, and the necessary rearrangement of studies entailed thereby.

Communications were received from the Secretary of the Royal College of Surgeons.

The rest of the meeting was occupied with a subject declared to be *secreta collegii*, and at 7 o'clock the further discussion was adjourned till Saturday (June 20th).

THE JOHN HOPKINS CO-EDUCATIONAL MEDICAL COLLEGE.

Miss Mary Garrett has contributed an additional $10,000 to the endowment fund of the proposed John Hopkins Medical School, says the Baltimore correspondent of the *Journal of the American Medical Association.* In a letter dated April 27th, addressed to President Dobbin, of the Board of Trustees, she makes this offer payable October 1, 1892, subject to the following conditions: That by February 1, 1892, the trustees raise the remainder of the sum necessary to bring the endowment up to $500,000—the minimum limit proposed by the trustees—and further that the trustees shall give notice in February, 1892, that they will open the school in October, 1892, and shall actually open it then. The committee of ladies organized to raise $100,000, having accomplished their object has disbanded. The following represents the present status of this endowment: The entire sum raised by the committee of ladies of Baltimore and elsewhere and paid over to the trustees May 1st was $111,000; there were already in hand additional funds sufficient to raise this amount to $178,780. In order to avail of Miss Garrett's offer, it is therefore necessary to raise $221,219. The trustees have accepted her offer and have resolved to endeavor to raise the balance required. Of the $111,300 raised by the ladies, Baltimore contributed $68,882; the next largest contribution was Boston's, $20,231, and Philadelphia's $8,075. If the ladies would only raise $200,000 to endow some medical college already in existence it would do a vast deal more good. The college in this city, for example, would be enormously helped by it.—*N. Y. Med. Jour.*

The Mississippi Valley Medical Association will hold its 17th annual session at St. Louis, Wednesday, Thursday and Friday, October 14, 15 and 16, 1891. Reduced rates and an excellent programme will bring out a large attendance. The medical profession is respectfully invited. The officers are as follows:

President.—C. H. Hughes, M. D., 500 N. Jefferson Avenue, St. Louis.

Secretary.—F. S. McKeith, 57 W. 7th st., Cincinnati, Ohio.

Chairman Committee of Arrangements.—I. N. Love, M. D., 501 N. Grand Avenue, St. Louis, Mo.

THE TRAGIC AND LAMENTABLE FATE OF AN ERRANT BACILLUS KOCHII.

AN HYSTERICO-BIOGRAPHICAL, LABORATORIOUS AND EPICAL EPISODE DONE INTO POETRY OF THE PRESENT DAY.

BY KATISHA KATZENJAMMER, OF THE BACTERIOLOGICAL INSTITUTE.

Translated from the Japanese.

A little spore in a culture grew,
Listen to my tale of woe!
Embedded in a mass of glue,
Till a full fledged bacillus it sprang into view,
Listen to my tale of woe!
Now day by day its ambition grew;
Listen to my tale of woe!
Like the witch in Macbeth who made the stew,
It said to itself, "I'll do! I'll do!"
Listen to my tale of woe!

It saw its chance in a day or two:
Listen to my tale of woe!
A draught of wind through the laboratory blew,
And out of a window the bacillus flew.
Listen to my tale of woe!
In a neighboring orchard a little peach grew;
Listen to my tale of woe!
The little bacillus came there too,
And Johnny Jones with his sister Sue,
Listen to my tale of woe!

Now, they ate the peach of emerald hue,
Listen to my tale of woe!
And swallowed the little bacillus too.
Which well in life its mission knew.
Listen to my tale of woe!
Now, the doctor was called to attend them too,
Listen to my tale of woe!
Who took from his pocket his microscope true,
And brought the bacillus into view.
Listen to my tale of woe!

He said, "Here's the cause of this cry and hue,"
Listen to my tale of woe!
For the comma-bacillus well he knew;
And he stained it red and he stained it blue,
Listen to my tale of woe!
In Susie's abdomen a little glue;
"Ah! here is infection and zymosis too,
Tis sad to say; Boo-hoo! Boo-hoo!"
Listen to my tale of woe!

Now, all kind friends my advice to you,
Listen to my tale of woe!
Is, when you are walking with a maiden true,
Avoid the peach of emerald hue!
Listen to my tale of woe!
And if, like Adam, you are tempted too,
Listen to my tale of woe!
Remember the fate of John and Sue,
Who ate the peach of emerald hue,
And the wicked bacillus that got stained blue,
Listen to my tale of woe!

CHORUS.
Hard trials for them two,
Johnny Jones and sister Sue,
And the peach of emerald hue,
Also the comma bacillus too,
Listen to my tale of woe!

—*Pacific Druggist.*

DEATHS OF EMINENT FOREIGN MEDICAL MEN.

The deaths of the following distinguished members of the medical profession abroad have been announced:—Dr. Manuel Moreno de la Torre, editor of the *Crónica Médico Quirurgica*, of Havana.—Dr. Bisping, of Mülheim.—Dr. L. Jacoby, the eminent Breslau otologist, at the age of seventy-four.

OXFORD UNIVERSITY MEDICAL SCHOOL.

An important step has been taken at Oxford University in the furtherance of medical education. Convocation last week by 193 votes to 46 passed a decree authorizing the expenditure of £7,000 for dissecting-room, museum, working rooms, and lecture theatre for the department of human anatomy. The vote was proposed by Professor Price, F. R. S., and supported by the President of Corpus (Dr. Fowler), Dr. Theodore Williams, Dr. Church and others. The opposition on the other hand was led by the Warden of All Souls (Sir W. Anson.) Another important matter was also decided at the same meeting, namely, that there should be an extension of the department of Animal Morphology under the direction of the Linacre Professor of Comparative Anatomy. Verily, this is a forward movement on the part of the University which has come none too soon. The condition of the Medical School at Oxford has been scarcely less than a by-word for many years. We trust that a new order of things is now about to be inaugurated. With such splendid means at hand, why should the Oxford School not take a worthy position in the cause of medical education? There is no reason for this saving the want of organization; a beginning has now been made, let it bear good fruit and be the means of taking away a reproach from an honored University.—*Med. Press.*

THE
MEDICAL AND SURGICAL REPORTER

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Clinical Lecture.[1]

APPENDICITIS—OPERATION.

BY JOHN ASHHURST, Jr., M. D.,

BARTON PROFESSOR OF SURGERY, AND PROFESSOR OF CLINICAL SURGERY IN THE UNIVERSITY OF PENNSYLVANIA, SURGEON TO THE PENNSYLVANIA HOSPITAL.

Gentlemen:—The first patient that I show you to-day is a young man, twenty-four years of age, who presents an interesting condition, the treatment of which may be said to be one of the burning questions of surgery at the present time. The patient was admitted to this Hospital last July, suffering with typhoid fever. He recovered and left the house August 15, but was again admitted in September with perityphlitis, which is an inflammation around the cæcum. He remained in the Hospital nine days, got better and went out. He again returned on December 9, after an interval of three months. On this occasion he said that five days before admission he had been taken with pain in the right iliac fossa, and with symptoms in every respect similar to those of the former attack. In the abdomen, in the right iliac region, there was a distinct mass four or five inches by two inches, painful on pressure. The temperature was 101.4° F. The urine was of a dark color, but contained no albumen or sugar. The amount passed in 24 hours was thirty-four ounces. The treatment consisted in the administration of calomel and soda until the bowels were moved. Blisters were applied over the painful region. The day following admission the pain was much relieved, and the temperature had fallen to 99° F. The bowels moved easily. December 12, there was still improvement; the mass was not so tender, and was smaller. On the 15th, there was no pain and the mass was still smaller. On the 19th, he was discharged with some slight resistance in the right iliac fossa, but no pain.

Such was the history until he presented himself the day before yesterday with the statement that three days before he had had a return of pain in the right iliac region. There is now a mass in this region which is not as diffuse as in the last attack. While there is some hardness and resistance in the line of the groin, yet the principal tumor appears to be circumscribed, two inches inside of the anterior superior iliac spine, in other words, in the position of the vermiform appendix. The patient has great pain and has lost much sleep, and there is great tenderness not only on firm pressure but on the slightest touch, with a faint suspicion of doughiness, suggestive of deep-seated pus. There is also high temperature and marked constitutional disturbance.

The first question in this case is in regard to the diagnosis, and the second in regard to the treatment. There can be no doubt, I think, that it is a variety of what is called perityphlitis. It seems to me that the inflammation must be more localized to the appendix than it was in the former attack, and that it is proper, therefore, to designate the present condition by the somewhat clumsy term of appendicitis.

With regard to the treatment: The prevailing tendency is toward exploratory operations in all cases in which inflammation occurs in this situation. I am sufficiently conservative to believe that indiscriminate operation in these cases is injudicious, and that a very large number of cases of perityphlitis and typhlitis will end in recovery under simple treatment and not recur, or that if they do, the patients may still get well without any particular danger, and have no special trouble as the result of the disease. In other cases, the disease will run on to the production of peritonitis, sometimes general peritonitis, but even under these circumstances it does not seem to me that the line of safety is, as a rule, in operation. I be-

[1] Delivered at the Pennsylvania Hospital.

lieve, however, that there are some instances, and I think that this is one, in which we can fairly well localize the inflammation to the appendix. There is no general peritonitis. There does not appear to be any great extent of local peritonitis. There is reason to believe that the appendix is inflamed, possibly surrounded by a collection of pus, and probably containing some concrete mucus, possibly a foreign body. We have to consider what will be the condition if the patient is let alone. He may convalesce as on previous occasions, and may go a long while without recurrence. On the other hand there is a certain amount of risk that the collection of pus, which I suspect is present, may burst, and that the pus will be poured out into the peritoneal cavity leading to general suppurative peritonitis. In this particular case, it seems to me that it is justifiable to make an exploration, and, if we find that the appendix is diseased, to remove it, provided that it is not so firmly bound down as to render removal impossible.

I do not recommend an operation in these cases when there is simply perityphlitis without the inflammation being localized. Nor on the other hand do I recommend an operation where the case has run on to the production of general peritonitis, unless it is suppurative peritonitis. Then, although the patient will probably die, the only hope lies in the evacuation of the pus and the washing out of the abdominal cavity. Ordinary cases of peritonitis following typhilitis admit of safer treatment than by opening the abdomen. The ordinary treatment of peritonitis will in these cases give a better hope of recovery. When there is a localized inflammation which can almost be traced to the appendix itself, and when pus is probably present, I think an operation is justifiable. It is therefore only in exceptional cases that I recommend an operation.

The question has been agitated as to the time when the operation should be performed; whether it should be done when the part is inflamed, or whether in the interval between the attacks, when the patient is well. Here again I am conservative enough to say that if the patient is well, he should be let alone. The time to operate is when he is suffering. Those surgeons who hold that opening the abdomen is attended with little or no risk believe that it is right to operate when the patient is well. In my judgment, the time to operate is when there is danger to life, and yet not such imminent danger as in general peritonitis.

My colleagues, Drs. Hunt and Morton, have examined this case, and agree that it is a proper one for exploration. On the former occasion the patient was so much improved twenty-four hours after admission, that he was practically convalescent. If I had found the same improvement follow in the present attack, I should have been disposed to recommend that operation be not resorted to. There has, however, not been such improvement as to make it probable that spontaneous recovery will occur.

I shall now proceed to the operation. The parts have been rendered aseptic, and I shall make an incision in the direction of the linea semilunaris, making a part of the incision over the point which we know to be the usual position of the appendix, that is two inches inside of the anterior superior spine of the ilium. The incision is four inches long, and the bleeding is controlled with hæmostatic forceps. Cautiously cutting down to the peritoneum, I tie the vessels with catgut ligatures before opening it. Incising the peritoneum there is at once a discharge of pus. This cavity, which is walled off by adhesions from the general peritoneal space, is irrigated with hot water, and with some difficulty I am now able to bring the appendix into the wound. This I cut off after tying it with a strong silk ligature. After the cavity is thoroughly irrigated, I insert a glass drainage tube, and suture the peritoneum with catgut, then uniting the skin and muscles with silver wire. The usual antiseptic dressings are applied and the patient is returned to his ward.

[Convalescence was uninterrupted, the drainage tube was removed in a few days, and the patient left the Hospital after some weeks, entirely recovered].

COMMUNICATIONS.

RELIEF OF PARTIAL INTESTINAL OBSTRUCTION FOLLOWING THE REMOVAL OF THE UTERINE APPENDAGES.

BY CHARLES P. NOBLE, M. D.

SURGEON IN CHARGE OF THE KENSINGTON HOSPITAL FOR WOMEN, PHILADELPHIA.

Questions concerning the limitations of abdominal surgery for good and ill, are still pressing for solution. Conditions which demand immediate operation (which positively contra-indicate abdominal section) or which render delay advisable, are constantly con-

fronting the surgeon. Because of the multitude of diseased conditions found within the abdomen, the complexity of the problems involved, and the well recognized impossibility of making absolute diagnosis in all cases. Greater responsibility is thrown upon the surgeon than is the case in the surgery of other regions of the body. This aspect of the subject, while it should stimulate the surgeon to make use of all known means in reaching conclusions, should also prevent him from forming absolutely fixed opinions except upon very positive evidence. The grounds upon which to advise abdominal section and upon which to refuse it, are not yet fixed.

More especially is this true when the symptoms complained of, cannot be explained on physical grounds. Some have gone so far as to decry operation in all cases in which a bi-manual examination will not reveal some gross physical lesion. And yet such a rule will leave many women chronic invalids who can be cured or improved by operation. The effect of cystic and of atrophic ovaries, and of chronic ovaritis upon the health of women, is well recognized, and yet, these conditions are by no means always susceptible of diagnosis by bi-manual examination. The relation of adhesions to pelvic pain is always obscure. Even more gross pathological lesions may not be appreciated during the bi-manual examination. In some cases a consistent history of suffering referred to the pelvis must be sufficient to justify operation. This indication, of course, opens the door to indiscriminate and unnecessary operating in the hands of those so inclined, but this constitutes simply an abuse of the indication. Exploratory abdominal section has so little danger that it is justifiable and urgent after simple means fail in all cases in which life is endangered or health is destroyed by pelvic (abdominal) disease, not plainly inoperable.

As illustrating this principle, the case of Mrs. R. is reported. A surgeon who is a staunch opponent of operation except for gross diseases, refused to operate upon her, alleging that her sufferings were hysterical, because he had removed her uterine appendages, and because he could find nothing further to remove.

The woman's history has been prepared for me by Dr. Deekens, and is as follows:

Mrs. R., aged 29 years, German, of good family history, came to America seven years ago. She had always been strong and healthy up to that time. She worked in the country, and while over-exerting herself, lifting heavy weights, suddenly felt a sharp cutting pain in both groins, followed by great faintness, necessitating rest in bed for a day or two. Her subsequent period was intensely painful, and was followed by profuse metrorrhagia, which remained almost constant, producing a high degree of anæmia. She remained in this condition a year, still doing her work when able. At the end of that time she was married. Pregnancy followed shortly afterwards, and three months later while working hard, was seized with sharp groin pains as before, accompanied by abdominal cramps, succeeded by a free hæmorrhage containing masses of clotted blood. A physician was called in who pronounced it a miscarriage. In about six months she had a recurrence of her former pains, followed by symptoms of pelvic peritonitis with constipation, dischezia, dyspareunia, dysecoia, etc. Under the rest cure for several months, coupled with antiphlogistic treatment, she improved, and shortly after became pregnant. She was delivered instrumentally of a very large child.

The subsequent history is merely a repetition of the past, with intermitting attacks of pelvic inflammation, of greater or lesser severity, partially relieved temporarily by rest, poultices, glycerine tampons, etc. She was then advised to enter a hospital, and within the next few years was an inmate of four of the general hospitals of the city. She was by this time a broken down hysterical hypochondriac, not being free from pain for an hour. In April 1889, a double ovariotomy was performed, both ovaries being found enlarged and cystic. Partial relief followed the operation temporarily, but later she suffered extremely from abdominal pain.

A year later we again find her a hospital inmate. At this time she could not walk owing to the excruciating pains caused by locomotion. The surgeon-in-chief decided that a secondary operation was not indicated, presuming that the symptoms were mainly of a hysterical order. The patient's sufferings were real, however, and she sought admission to the Kensington Hospital for Women. Her condition was one of profound anæmenia, malnutrition and neurasthenia, and the chief complaints were, pain on locomotion, defecation and coition. Special stress was laid on the agony accompanying defecation. On examination a hard, sensitive mass was found to the left and behind the uterus, evidently connected with the stump from the left ovary and tube. Simple intestinal adhesions or septic inflammation

about the ligature was suspected. The uterus was also found bound firmly in retroflection. These conditions were considered sufficient to account for the pelvic pain, and an exploratory incision was advised and gladly accepted.

On opening the abdomen, the uterus, small intestines, rectum, and stump of the left ovary and tube, were found firmly matted together. A beginning was made by freeing the uterus, when the intestines were, with long-continued effort, separated.

One knuckle of ileum was adherent deep in the pelvis, and the peritoneal and muscular coats were torn off in detaching it, necessitating sutures. The mass now consisted of thickened, broad ligament, and adherent rectum. As this is a fairly stationary organ, its separation was not attempted. No evidence of pus was found about the old pedicle. Irrigation and drainage completed the operation. The convalescence was interrupted by the appearance of symptoms of obstruction of the bowels on the second day, the most prominent symptoms being abdominal pain and increasing tympany and vomiting.

In anticipation of this possibility, powders of calomel (gr. $\frac{1}{12}$) had been given hourly, commencing on the first day. Enemas of turpentine and glycerin, and of soap suds given through the rectal tube, for a long time proved ineffectual. Concentrated solution of citrate of magnesia was given and rejected. The bowels were finally moved on the fourth day, after an enema of turpentine, Epsom salts, glycerin and water, given through a soft rectal tube, pressed up into the colon. Threatening symptoms at once subsided, and the patient made an uncomplicated recovery.

At the present time, five months after the operation, she has gained (11) eleven pounds, has done her own house-work, which she has not done for four years, is entirely relieved of pain in defecation, and for the first time in four years, says she is without any pain whatsoever. While her general condition is much improved, she is still markedly anæmic, and to completely restore her to health, much time and improved hygienic surroundings will be necessary. The conditions found, amply justified operation, and the result secured has been most gratifying.

The operator who removed the uterine appendages, and who refused a second operation, is a general surgeon. While he invaded the domain of the gynæcologist to remove the uterine appendages, yet, he overlooked the symptoms pointing to intestinal adhesions and partial obstruction of the bowels—conditions coming within the province of the general surgeon. These facts are of interest, as bearing upon the question of the advisability of general surgeons doing pelvic surgery; and especially of the establishing of departments for gynæcology in general hospitals.

In conclusion, I would urge that while it is prudent and necessary in general to require objective evidence of grave pelvic disease before counseling operation, yet, that there are cases, in which a consistent history of pelvic pain, together with the evidence of disease in the general condition of the patient, and the failure of simpler methods of treatment, requires, that the surgeon should offer to the patient the possible results to be obtained after making an accurate diagnosis by exploratory section.

LAVAGE OF THE STOMACH.*

BY MEFFORD RUNYON, M. D., NEWARK, N. J.

My subject to-night has been chosen in the hope of obtaining the expression of your opinion upon the merits and demerits of a method of treating stomach diseases, which in the hands of many has proved itself of considerable practical importance. My own experience has necessarily been very limited, and I shall attempt nothing further than briefly to state, the literature of the subject I have had at my command, and give roughly the histories of the few cases I have so treated.

Lavage of the stomach was not practised as a routine method of treatment until 1867, when Küssmaul commenced using the ordinary stomach pump with its stiff tube and suction and force syringe, in cases of dilatation of the stomach following chronic catarrhal inflammation. He obtained good results, but many objected to the treatment because of the inconvenience and danger of the instrument used. These objections were overcome by the introduction by Taucher in 1879 of the soft rubber stomach tube in place of the stiff one employed by Küssmaul, and the application of the principle of the syphon instead of the suction and force syringe. Taucher's tube has been modified, but his method of applying the treatment is the one commonly used to-day.

I show you here the instrument which is in in general use at the present time. It consists

*Read before the Orange Mountain Med. Society.

of a soft, flexible, red rubber catheter 30, inches long, ⅓ inches in diameter, having near its closed extremity two "velvet eyes." To the open extremity the rest of the apparatus consisting of a glass funnel and a piece of black rubber tubing 40 inches long, is attached by means of a short glass tube. There is a stomach tube sold, against which I would warn you, made of black rubber throughout, open at the stomach end and very flexible. I have attempted to use this instrument on several occasions, but have never been able to introduce it into the stomach. It would invariably curl upon itself in the patient's mouth, and no amount of effort would force it past the pharynx. But the tube I have shown you can almost invariably be passed with little difficulty. These are its advantages. It is cheap, simple, readily cleaned, easy of introduction convenient and safe.

METHOD OF INTRODUCTION.

The patient should be placed in a chair with a straight back, or on a stool, the operator standing in front. The patient's head should be kept *straight*; if flexed or extended, it is difficult to pass the tube into the œsophagus. Many have recommended oiling or greasing the tube before it is introduced, but this seems often to retard rather than facilitate its passage. The taste of the oil, even the sight of the oiled tube, is sufficient to nauseate many. All that is generally needed is to dip the tube into the solution you are about to use; this warms it, and the abundant secretion of saliva induced by the mechanical irritation in passing the instrument, is all the lubricant required. A word to your patient as to the sensations he may expect is advisable before attempting the introduction of the tube, usually the more intelligent persons are those with whom the least difficulty is experienced.

The patient's mouth should not be opened widely, for the muscular effort made in separating the jaws hinders an easy introduction. Pass the tube gradually into the pharynx; as it reaches this point a spasm of the muscles almost always occurs; pause for a moment until this subsides, and then quickly, but not hurriedly, push the instrument on into the œsophagus. If instead of passing readily, the tube curls up in the patient's mouth, it is better to withdraw it and start afresh than to continue ineffectual efforts to pass it. No difficulty is usually experienced after passing the pharynx until the stomach is reached; here the irritation of the tube against the collapsed walls of the organ often induces severe efforts at vomiting. A little of the solution you are to use, poured quickly into the tube, separates the walls of the stomach, thus removing them from the cause of irritation, and the vomiting ceases almost immediately. When the tube has been well introduced beyond the cardiac opening, the liquid should be poured in. Holding the funnel above the level of the patient's head, the operator should allow the solution to flow in until the patient, by a sign previously agreed upon, complains of a sensation of fullness, when the funnel is depressed quickly before the last of the liquid has left it, to a level below that of the stomach. This converts the tube into a syphon and the organ is quickly emptied. Usually little difficulty is met with in removing the stomach contents by means of the syphon. Occasionally bits of undigested matter or mucus clog the tube, but these can generally be removed by allowing a little more liquid to flow in. If this method should fail to clear away the obstruction, it may be necessary to remove the tube and cleanse it. The quantity of liquid used at any time will depend entirely upon the case under treatment. It will vary from a pint to several quarts. The most I have ever been able to use in any case has been two and a half quarts, and this in one of dilatation, the result of chronic catarrhal inflammation. The quantity removed should always be compared with that introduced into the stomach. A great variety of solutions have been recommended for use in lavage of the stomach. The one selected will depend upon the object the physician may have in view. If the desire is simply to cleanse the organ, or to remove its contents for diagnostic purposes, plain water, warm or hot, is best. Indeed in the great majority of cases water is all that is needed. Occasionally, when there is a good deal of fermentation going on in the stomach antiseptic solutions of boric acid, resorcin or carbolic acid seem to give better results than water alone. Bicarbonate of soda, in solution, or any of the simple alkalies are sometimes used to advantage. If, where there is a good deal of pain and irritability of the stomach, subnitrate of bismuth be suspended in water and the solution allowed to remain in the organ until the bismuth settles, great relief is often obtained.

The most convenient time to practice lavage, as a means of treatment, is in the morning before the injection of food. I say as a means of treatment, for if it be employed for diagnostic purposes, it is often better, and

after food has been taken in this way, it is possible to determine how well the stomach is digesting any special article of diet. In practicing this treatment in my office it has been my custom to advise patients to take a glass of hot milk early in the morning, at least three hours before coming. This I have found is sufficient to stay the stomach while it does not in any way interfere with the process of washing out. The length of time it is necessary to continue this method of treatment will, of course, vary greatly in different cases, a single application may be all that is required in an attack of acute indigestion, while in long-standing cases of an inflammatory nature it may have to extend for months and even years. Where it has to be continued for a long time, it is not necessary for the physician to carry it on himself. After a week or two of practice the patients learn to do it quite as well, and a tube may be entrusted to them with instructions how and when to use it. I have at the present time several patients who are washing out their stomachs one or more times each week, and doing it apparently with as little concern as they would wash their faces or brush their teeth.

In what cases may lavage of the stomach be used? I have already stated that when Küssmaul first introduced the treatment it was employed only in cases of dilatation of the stomach following upon a chronic catarchal inflammation, and it is still in these cases that it is most frequently employed. But the last few years have given it a far wider range of application, until, at the present time there is hardly a disease of the stomach in which it has not been used. Acute indigestion, or dyspepsia, chronic dyspepsia, alcoholic gastritis, ulcer of the stomach and cancer have all been treated in this way, and with satisfactory results. I have known even of a case of that so-called disease, nervous indigestion, miraculously cured by a few applications of the gastric syphon. How much moral effect had to do with the cure, I am not prepared to say, but it relieved me of the fast becoming obnoxious presence of my patient, besides bestowing upon me her warmly expressed gratitude.

In the stomach diseases of children it is fast becoming a well recognized means of combatting successfully these dangerous symptoms which arise so suddenly, and often terminate so fatally. Seibert has studied its use in over 500 cases having used it in acute gastritis, cholera infantum, acute indigestion, chronic dyspepsia. He reports most satisfactory results. Taucher has recommended its use in very young infants, and reports a case of a child 27 days old, where there was persistent vomiting accompanied by constipation and extreme emaciation; prompt and permanent benefit was obtained by washing out the stomach.

Leo has reported over two hundred cases in children treated by lavage, and his experience has been very favorable to its use.

I could occupy much of your time to-night in describing the cases and the results obtained by those I have mentioned, but to most of you it would simply be repetition.

I have described to you briefly, gentlemen, this method of treatment. I have used it myself in about 40 cases, embracing acute dyspepsia, chronic dyspepsia, chronic catarrhal inflammation, with and without dilatation and ulcer of the stomach; with a very few of these I have used it only once, the patients disappearing never to return. Whether a miraculous cure was effected, or the patients were disgusted with the treatment I have never been able to determine. These, however, have been the exceptions. With the rest, I have found it convenient, easy of application, not markedly unpleasant to the patient, free from danger, and accompanied by the most gratifying results. In the light of this limited experience, I am free to say, that in no other single method of treating stomach diseases have I found as much satisfaction as in this.

ANTISEPTIC TREATMENT OF WOUNDS.[1]

BY H. J. WARMUTH, M. D.,

SMYRNA, TENN.

Nothing delighted the sight of the old-time surgeon so much as the appearance of healthy pus in wounds, while to-day we endeavor not only to prevent suppuration, but at the same time to reduce all wounds, as it were, to a condition of subcutaneous injuries, in order to induce healing by primary union.

We are taught that suppuration is only various forms of fermentation, or of bacterial growth, and that wound fever, erysipelas, pyæmia, etc., are not accidents, or owing to a vitiated constitution, but are due to germs imported into wounds from without. Antisepsis is the gospel of absolute cleanliness, hence antiseptic surgery requires that anything coming in contact with a wound, should be perfectly free from germs, there-

[1] Read by title before the Tennessee State Medical Society, April 14, 1891.

fore the surgeon's hands, especially his finger-nails, instruments, sponges, dressings, etc., should be aseptic, in order to keep wounds free from suppuration.

There are many in the ranks of the profession to-day who are skeptics, or do not pay any regard to the antiseptic management of wounds, either from ignorance of the details or from a desire to follow the lead of a few eminent surgeons. We must not forget, however, that Lawson Tait is one of the quickest and most successful operators on record, and that in all his operations, wound surfaces are exposed to the action of the air but a minimum of time, and while he discards all antiseptics, yet he insists upon the most scrupulous cleanliness in his own behalf, and also on the part of his assistants and nurses, before, during and after each operation. A disregard of antiseptic principles has been productive of very serious consequences to patient and surgeon. Suppose we were to perform an amputation, and dress the stump according to ancient usage? Removing the first dressing we will probably find suppuration, afterwards, perhaps, sloughing. After a tedious siege the patient recovers and consults a lawyer. The result will be a suit for malpractice. The Court will hold, that wounds under antiseptic management will heal without suppuration, hence a disregard of this system renders us guilty of wilful negligence, and we are therefore liable for damages.

In the treatment of wounds it is necessary to adopt some kind of a plan, in order to procure the best results, and while it is not necessary to use the cumbersome Lister spray, or to use so many different antiseptics, it is desirable to have a few on hand, in order to meet any cases of emergency. A few antiseptic tablets, antiseptic powders, a bottle of carbolic acid and iodoform, are really the only antiseptics needed. In addition we need aseptic catgut or iron dyed silk for ligatures or sutures, absorbent cotton, antiseptic gauze, rubber adhesive, assorted tubes for drainage and a few roller bandages. The antiseptic tablets (Sharpe and Dohme) are composed of bichloride of mercury 7.3, and ammon-chloride 7.7. Dissolved in a pint of water we have a solution of 1–1000 for cleansing the skin before operating. For small sores we use 1–3000, for larger wounds, 1–10,000, and for large joints, or the peritoneal cavity, 1–21,000. This is the most powerful germicide known. Antiseptic powders are composed of boracic acid, gr. jss, and salicylic acid, gr. xvj each. Dissolved in a pint of warm water, we have Thiersch's solution, which is milder than either the bichloride or carbolic solution. The rule is, the less irritation consistent with a thorough germicidal treatment, the better will be the chance of primary union.

Carbolic acid is also an effective germicide in 1–500. For surgical purposes we use 1–30 or 1–40. Iodoform is used as a dressing.

The application of antisepsis to a proper management of wounds depend upon wounds themselves. Small incised wounds require first, to check the hæmorrhage. If the vessels are of small size, torsion will suffice; if of larger size a ligature will be needed. Should hæmorrhage, however, have ceased, then we proceed to cleanse the surface by allowing a gentle stream of warm Thiersch's, or a weak carbolic, solution to fall upon the wound, either from a sponge or a fountain syringe. Particles of dirt or sand may be removed with forceps or a small pledget of absorbent cotton, previously dipped in an antiseptic solution. After thoroughly cleansing the wound, we dry the same with absorbent cotton, approximate the edges closely, and introduce our stitches. In this kind of wounds we do not anticipate suppuration, therefore drainage will not be necessary. After the surface has been dried, we dust iodoform all over the line of incision and wash off the excess. In a few minutes this line is covered by a crust of iodoform, which is insoluble in water. No other dressing is needed. In a few days raise the edge of the crust, cut your stitches, remove the crust, and your wound is healed. In amputations or other large operations, however, it requires three basinsfull of bichloride solution; one for sponges, one for ligatures and sutures, and the third for the purpose of continued irrigation, before, during and after the operation. Instruments require a carbolic solution 1-40 to render them aseptic. After drying the surfaces and introducing the necessary stitches, dust iodoform all over the line of incision, and begin to dress the stump by applying a silk protective over the wound, and as long as it remains green the wound is aseptic, but as soon as it changes to black it has become septic. Most surgeons, however, have discarded the protective and proceed to apply 5 to 8 layers of antiseptic gauze moistened with the antiseptic solution. The gauze then is covered carefully by a piece of rubber tissue, thoroughly immersed and disinfected in the bichloride solution. Some prefer either oiled silk or mackintosh cloth, but anyway the tissue or any of them should overlap the gauze by several inches on all sides. The

whole is held in position by a few turns of a roller bandage, and this dressing may be left untouched for several days. The thermometer forms a very valuable guide as to the time of changing the dressing. A rise of temperature of 101° is an indication to change, whether the patient complains or not. After the first dressing has been removed, we proceed to thoroughly irrigate with the antiseptic solution as before, and to apply another dressing similar to the first. Where we expect more or less necrosis, however, we must provide for its removal by means of aseptic drainage tubes. They should be brought out at the most dependent part; holes are cut in the strip of antiseptic gauze for the ends of the drainage tubes to pass through. When to remove these tubes depends upon circumstances, from a few hours to three or four days and even longer.

While the above named antiseptics will prevent suppuration, we possess another agent, which will not only sterilize a suppurating wound but will also stop suppuration abruptly. Peroxide of hydrogen ($H_2 O_2$) will pursue pus through the most tortuous passages into the remotest recesses and destroy pyogenic and other micro-organisms. I have employed a 15 vol. solution (Mallinckrodt, St. Louis) in carbuncles, bone felons, etc., very successfully by injecting the cavities with a small glass or rubber syringe, waiting until the foaming ceases and injecting again until the solution fails to bubble. I then apply an antiseptic dressing. The peroxide has been used by others with success in abscesses of the brain and breast, ozæna, gonorrhœa and other suppurating cavities. A close contact with metals, however, will decompose the peroxide.

I sincerely trust that the short method of treating wounds antiseptically, described in this paper will be found not only easy of application, but will, also, by observing results, prove efficient in the management of wounds.

EMPLOYMENT OF PILOCARPINE MURIATE IN LABYRINTHINE DISEASE, WITH REPORT OF CASES. *

BY S. MACCUEN SMITH, M. D.

PHILADELPHIA.

Our object in calling attention to the following interesting cases is, as far as possible, to determine the diseases in which pilocarpine may be of decided benefit, and, if possible, to add to its sphere of usefulness.

Case I.—Mr. F. W., of New Jersey, twenty years of age, has been a bright scholar until within the last two years, when, on account of progressive loss of hearing, he was compelled to leave school and seek medical aid. From a critical examination of the patient, and also of his parents, the personal and family history were pronounced unusually good. The father gave positive assurance of being entirely exempt from any previous specific history, and certainly observation would substantiate his statement, as his entire family of seven children showed impressive evidence of good health.

The patient stated that he had been under treatment for three years with several specialists in neighboring cities, only to meet with discouragement, as his hearing continued to grow worse.

On examination the external ear and canal were found to be normal; membrane tympani slightly opaque and retracted, otherwise normal, except some inflammation the extent of the manubrium mallei. In the post-nasal space the pharyngeal tonsils were found to be much enlarged, the hypertrophy extending beyond and occluding each Eustachian tube. Very low notes of both ærial and osseous conduction of sound were perceived in each ear—the higher notes not being heard except when intense—which would seem to prove that the internal ear was at fault; and as the voice could be heard much better than the watch-tick, this would offer additional evidence of internal ear disease. By my watch, which measures fifty inches, the hearing distance of R. E. $=\frac{1}{1}$; of L. E.=quite negative; and yet ordinary conversation from the bass voice could be heard at six feet, but individual words could not be distinguished until the sound-wave was intensified.

By removing the enlarged tonsils and post-nasal adenoid growths, the hearing power was somewhat increased by equalizing the atmospheric pressure, and thus to an extent correcting the retracted condition of the membrana tympani. Knowing this patient to have been under special treatment for some time, and that the usual methods of procedure had failed to give relief, we deemed a repetition of the same to be a useless experiment, and therefore concluded to place him under the pilocarpine muriate treatment, by hypodermic injections. As the object of such treatment is to produce profuse diaphoresis, the dose to be employed must be in accordance with individual idiosyncrasy. It

* Read before the Philadelphia County Medical Society, June 24, 1891.

has been our custom to commence with a small dose, one-sixteenth to one-eighth grain, and gradually increase, until the full physiological effects of the drug are produced, provided contra-indications (*to be determined by previous careful examination*) do not manifest themselves.

The dose usually employed is one-sixth grain, although one-fourth grain is frequently necessary. In view of the danger to life that is possible to occur in administering full doses of pilocarpine, Dr. Lawrence Turnbull and other authors, advise the use of atropine or strychnine in conjunction with pilocarpine. This is certainly a proper and safe precaution, and should be employed in selected cases; yet, in the greater number of cases, the writer does not find this essential.

As patients cannot usually stand the daily injection, it is our custom to administer one hypodermic every second day; always *insisting* on the patient remaining in *bed* from three to five hours after each treatment, as the perspiration continues for that length of time, and any undue exposure or exertion may produce unfavorable symptoms. These hypodermics are continued until five, eight, or ten have been given, and, if additional ones are required, they may be administered at intervals of five to ten days, at the symptoms indicated.

We will now relate the treatment and improvement of the case in question, the details of which are purposely given, as they are intended to express in main the general treatment and improvement of the subsequent cases; the points of difference, however, will be mentioned in each case.

February 2, 1889, we gave the above case the first hypodermic of one-eighth grain (the hearing distance, you will remember, was R. E. $\frac{1}{L}$, L. E. negative); next day patient thought tinnitus was much less severe; no improvement in hearing; perspiration not profuse. February 4th, gave hypodermic of one-sixth grain, which caused copious diaphoresis, some nausea, and headache. During that evening patient heard wagons passing his window, but could not hear the music from some stringed instruments only fifteen or twenty feet away; his hearing for conversation had materially increased; tinnitus about the same watch-tick, R. E. $\frac{2}{L}$, L. E. $\frac{4}{L}$. It is interesting to note the marked improvement in left ear, which up to this time had been negative.

6*th*. We repeated hypodermic injections of one-sixth grain, as we found this to produce full physiological effect; perspiration about the same; absence of nausea and headache. The next day patient called and stated his hearing had never been so bad, he being unable to hear anything except very intense *high* notes; he was, therefore, much discouraged; all his previous hopefulness having vanished, he refused to submit to further treatment. However, he called the following day and informed me he would continue treatment, as "he thought nothing could possibly make him worse." The peculiar effects of this last hypodermic were the almost entire loss of hearing and the change to perceiving *only high* notes.

8*th*. One-sixth grain was again given, which resulted in the hearing being restored to R. E. $\frac{3}{L}$, L. E. $\frac{3}{L}$; tinnitus almost gone; feeling much better in general health and spirits.

10*th* and 12*th*. He received one-sixth grain, with marked improvement in hearing; R. E. $\frac{9}{L}$, L. E. $\frac{11}{L}$; no tinnitus; general health continues to improve.

At this date patient's father called to be treated for "some fever blisters on tongue and throat," which, on examination, presented such questionable appearances that I, without hesitation, pronounced them syphilitic. He then admitted having had a chancre when twenty years old (his age at this writing being forty-nine). His excuse for previous false statements was, that every physician whom his son had heretofore consulted questioned his family history, and a confession on the part of the father invariably resulted in the son being put on large increasing doses of iodide of potassium and mercury, which so impaired his health that the treatment was discontinued; and as his son had never improved under such medicament, he concluded to conceal his family history, with the hope that other methods of treatment might be pursued.

Granting that the patient's impairment of hearing was specific in origin, in view of his marked improvement I thought it wise to continue with the pilocarpine treatment, in order to more thoroughly establish its efficiency in this class of cases.

The hypodermics were continued on February 12th and every second day thereafter, until eight had been given, at which time his hearing distance was, R. E. $\frac{26}{L}$, L. E. $\frac{32}{L}$; general health improving daily; his weight had increased seven pounds; tinnitus aurium entirely gone.

21*st*. The patient returned home, feeling that he had entirely recovered; but in two weeks he called again at my office with hear-

ing somewhat impaired—R. E. $\frac{22}{L}$, L. E. $\frac{26}{L}$—which he thought came from "catching cold," due to exposure. I again gave him three hypodermics, his hearing increasing to R. E. $\frac{36}{L}$, L. E. $\frac{39}{L}$. Additional hypodermics did not improve the hearing. Thinking he required some *specific* treatment, and remembering that iodide of potassium and mercury could not be tolerated by his stomach, I prescribed Hostelley's syrup of hydriodic acid in two-drachm doses, four times a day, well diluted in water; also inunctions of one drachm of ung. hydrarg. each night and morning. This treatment was continued for six months without experiencing any inconvenience, his hearing remaining about the same; no tinnitus; general health better than ever before, and at this writing—about fifteen months since beginning treatment—his hearing and general condition continue to be good, although the patient has not been taking any medicine for the past nine months.

Case II.—Mr. S. G., of Pennsylvania, aged seventy-one years, consulted the writer, with his family physician, July 8, 1888, and gave the following history: On January 6th of the same year, when arising at his usual hour, he was much alarmed at not hearing the customary noise on the street; thinking, however, that his servant had by mistake awakened him at too early an hour, he consulted his watch, and, on finding the hour rather later than usual, and as everything appeared distressingly quiet, he realized that his hearing had been entirely lost during the night. This complete loss of hearing was not attended with pain, tinnitus aurium, discharge from the ears, nor inconvenience of any kind.

After being under treatment for three months, and not receiving the slightest benefit, while drinking some hot milk by the direction of his physician, he was seized with intense tinnitus aurium, vertigo, and constant emesis *without nausea*, but with entire absence of pain. The emesis continued for only three hours, but the tinnitus and vertigo increased in severity.

In this condition the patient consulted the writer. A more despondent and pitiable mortal could not be imagined. He was not able to walk without assistance, and the tinnitus had prevented sleep for almost two weeks. The membrana tympani and the external auditory canal were normal, excepting the changes peculiar to a person of his years; the post-nasal space including the Eustachian tubes, was in good condition; in brief, both ears and their appendages presented the usual normal condition in so far as observation alone could determine. In this connection it is interesting to note the entire absence of evidence of disease in such cases. Osseous conduction of sound was well marked, especially in the left ear; aëreal conduction of sound was quite lost in both ears.

The family physician informed me that his patient had been on large increasing doses of iodide of potassium and mercury, but the stomach would no longer retain the potassium iodide.

We subjected this patient to the pilocarpine treatment, as previously described, with the following results: First treatment resulted in slight decrease in vertigo and tinnitus, but hearing power remains the same; caused some temporary vomiting, which was quite severe for two hours. The second and third hypodermics were given without any appreciable benefit; the fourth and fifth, however, were productive of marked improvement in vertigo and tinnitus, and at the same time caused such changes in the perceptive organs of hearing that he was able to hear intense waves of sound. After the sixth treatment tinnitus and vertigo had almost ceased, and hearing distance increased to $\frac{1}{L}$ in both ears. The seventh and eighth treatments did not produce much change in hearing distance, but entirely relieved vertigo and tinnitus. The nineth hypodermic caused much improvement in hearing: R. E.=$\frac{9}{L}$, L. E.=$\frac{11}{L}$.

The patient found it necessary to return home, and I directed his family physician to continue the treatment until four additional hypodermics had been given, at the end of which time patient called, with this marked improvement: R. E.=$\frac{21}{L}$, L. E.=$\frac{27}{L}$. The patient's business called him to the far West, and required his being away for four months. I gave him Hostelley's syrup of hydriodic acid to take during his absence. On his return the condition of hearing was almost normal, and remains the same at this writing.

As the details of a large number of such cases would consume much time and space, and withal prove tiresome, the object of this paper will have been accomplished by briefly stating that the writer has treated forty-seven cases of greater or less impairment of hearing—some amounting to almost entire deafness—by the method of hypodermic injections of pilocarpine muriate; and that

from his observations in these cases he feels justified in expressing the following conclusions:

That age and sex have no influence on the success or failure of treatment.

That in recently developed deafness with tinnitus this treatment is much more hopeful of success than in cases of longer duration. In one case, however, which was of specific origin, the patient, aged seventy-two years, had been almost deaf for twenty-two years, and yet this was one of the most successful cases treated. Nevertheless, this must be considered as very exceptional.

That cases of chronic suppurative otitis media with some degree of impaired hearing, resulting from the exanthematous fevers, are not proper cases to receive benefit from this method of treatment.

That deafness, vertigo, and tinnitus arising from syphilis seem to be especially benefited by the subcutaneous injection of pilocarpine.

That these results can only be attained by pushing the pilocarpine to its full physiological effect, and that profuse diaphoresis must be obtained in every case.

Special Correspondence.

Paris Letter.

Partial Nephrectomy, Extirpation by Dissection of a Large Cyst of the Kidney, by M. Tuffier.

In the following case reported by the above named surgeon we have union by first intention, of the renal parenchyma in the midst of the urinary liquid, thus proving the possibility of removing benign tumors of the kidney without destroying the function of the organ in question.

In the case of a serous cyst of the kidney, complete nephrectomy or drainage of the tumor is the usual resort. M. Tuffier states that the first method is dangerous, as out of twenty-four (24) operations 11 terminated fatally (45 per cent). The second method is incomplete, as in eight (8) operations, four (4) were followed by persistent fistulæ (50 per cent.,) necessitating a secondary nephrectomy. M. Tuffier's method supported by numerous operations, consists in radically extirpating the tumor, and preserving the kidney. He reports the following case: "A man sixty-four years of age employed in commercial business sought advice in consequence of hæmaturia. The patient entered Beaujon Hospital. The hæmaturia was of twelve months duration, with variable intensity, and accompanied by an exaggerated desire to urinate. The urine was blackish in color, contained some clots, indication of a notable loss of blood, which explained the anæmic condition of the patient. Careful examination of bladder resulted in diagnosis of neoplasm of that organ. Examination by the rectum was negative, and cystoscopy was impracticable. Upon palpation the kidney was found enlarged to the size of head of a fœtus. On the 9th of February I made an incision in the lumbar region. Upon exploration the body of the kidney was found to be normal, the upper extremity presented a prolongation, reaching to a point under the diaphragm, forming a tumor about the size of the fist. This was slowly uncovered, and brought into the field of operation by swinging it behind the 12th rib. I discovered that I had to deal with a large renal cyst, the transparency of which was complete. It occupied only the upper third of the organ, the rest of the gland presenting no alteration. I decided to extirpate the cyst by dissection. An assistant pressed upon the renal pedicle, while I dissected the cyst throughout the parenchyma. I removed in this manner the entire tumor without loss of blood. The opening was closed by passing fine cat-gut sutures through the lips of wound.

"Pressure was now removed from the pedicle. There was no oozing of blood. The kidney was replaced and abandoned in its lumbar abode. The muscles and aponeurosis were sutured in layers, and the skin was brought together by means of horse-hair, without drainage. On the seventh day the horse-hair was removed, and all was ended, as far as the wound was concerned. The hæmaturia continued and I extirpated, twenty days later, a neoplasm of the bladder, by supra-pubic incision. My patient is now well."

The results of nephrectomy or complete extirpation of the kidney, first practised by Wolcott in 1861, and later by Simon of Heidelburg, has not been encouraging, therefore this method by dissection seems to me susceptible of application to the vast majority of benign tumors of the kidney.

Lucia Redding Thompson, M. D.,
Paris, France.

Selected Formulæ.

PILOCARPINE IN GLAUCOMA.

Drs. Saint-Germain and Valude (*L'Union Med.*) recommend the following:

℞

Pilocarpini.....grs. ivss.
Aq. destil.....f ℥ijss.
M. ft. collyrium.

This collyrium is employed alone, or in alternation with a solution of eserine, in glaucomatous conditions of children, when eserine does not agree with the patient.—*The Prescription.*

TREATMENT OF SIMPLE CHANCRE.

In the *Revue Générale de Clinique et de Thérapeutique*, Castel, after pointing out that the danger of this lesion resides in great part in its virulence and in the facility with which re-inoculation is possible, proceeds to consider the best application for its relief. After reminding us of the fact that Ricord habitually employed the charcoal and sulphuric acid treatment for this purpose, and obtained from its use very extraordinary results, he draws attention to the more recent methods of treating the disease, also calling attention to the use of Canquoin's paste. Diday and Fournier recommend the employment of a solution of nitrate of silver, and the latter has found that the application of a 3 per cent. solution produces very excellent results. The lesions should be dressed with a tampon of absorbent cotton dipped in this solution and renewed three times a day. With this treatment simple chancre should be cured in from three to six weeks, and it may be advisable to apply not only antiseptic washes, but oxygen water and solutions of chloral or Labarraque's solution. According to Rollet and Mauriac the following applications are also very useful:

℞

Water..... 6 drachms.
Lemon-juice ..... 1½ "
Laudanum..... 45 minims.
Goulard's extract..... 1 drachm. M.

Or,

℞

Water..... 1 ounce.
Citric acid..... 45 grains.
Hydrochloric acid..... 45 "
Perchloride of iron..... 45 " M.

ATROPINE IN URINARY INCONTINENCE OF CHILDREN.

℞

Atropin. sulphat.....gr j.
Aq. distillat.....f ℥j.
M. Sig. Give as many drops as the child is years of age at 4 and 7 o'clock P. M.

—*Therapeutische Monatshefte.*

ANTHELMINTIC.

Iméré recommends the following for children from six to twelve years of age:

℞

Ethereal extract male fern.....gr. xlv.
Syrup Calomel.....gr. iijss.
Distilled water.....f ℥ iv.
Powdered gum arabic..... ℥ ss.

M. S.—To be taken at one dose. Milk diet should be given the preceding day. The worm is usually expelled in from thirty to forty minutes.—*Le Progrès Médicale.*

OINTMENT FOR HÆMORRHOIDS.

Audhoui recommends, in *L'Union Médicale*, the following ointment for hæmorrhoids:

℞

Extract of belladonna.....15 grains.
Extract of thebaia.....15 "
Antipyrin.....45 "
Mercury ointment.....2¼ drachms.
Simple cerate.....1 ounce.

This is to be made into an ointment and applied to the inflamed hæmorrhoids. Rectal injections of warm water are to be employed if constipation is present.—*Medical News.*

FOR THE GRIPPE.

Dr. E. R. Palmer, in a recent number of the *Prac. and News*, says: With the recurring prevalence of the so-called grippe, I beg leave to suggest the following as a specific for adults in such cases:

℞

Salol.....℈ iij.
Phenacetin..... ℈ ij.
Quiniæ salicylat..... ℈ j.
M. Ft. cap. xx. Sig. Two every three hours.

AN EXCELLENT COUGH MIXTURE.

℞

Ammonii hydrochlorate..... ℥ iij.
Morphina sulph.....gr. iij.
Potassii cyanidi.....gr. ij.
Syr. pruni virginiani
Syr. tolu.....aa..... f ℥ iij.
Syr. scillae..... f ℥ ij.
Aquæ q. s. ad..... f ℥ xij.
M.

Dissolve muriate ammonia, morphine and potash separately in the water and add other ingredients.

Sig. Tablespoonful when necessary, to relieve cough.

The above prescription I have found particularly efficacious in coughs of bronchitis, acute or chronic, affording relief when many other remedies had failed.—*Dixie Doctor.*

GALACTORRHŒA.

℞

Potassii iodidi. gm..... ℥ss.
Syrup raspberry " ..... f ℥v.
Aquæ dist. " ..... f ℥jv.
M. Sig. f ℥ss. three times daily.

—*Braun, L'Union Médicale.*

THE
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EDWARD T. REICHERT, M. D.,
PROFESSOR OF PHYSIOLOGY, UNIVERSITY OF PENNA.,
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Make communications as short as possible.

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The Editor will be pleased to get medical news, but it is important that brevity and actual interest shall characterize communications intended for publication.

LEADING ARTICLE.

THE TREATMENT OF TYPHOID FEVER BY COLD WATER BATHS—OR THE METHOD OF BRAND.

Although this mode of treating typhoid fever has recently attracted considerable attention in this country, it is surprising that in consideration of the favorable results reported, it has not been more widely adopted in private as well as in Hospital practice. However, when we consider the multitude of worthless therapeutic suggestions which fill the columns of medical literature, we are forced to admit that conservatism regarding new methods of treatment is rather to be commended. In the present instance, however, it would appear that because of certain very popular and deeply rooted antipathies to this form of therapeusis, there is danger of its careless or insufficient trial by a large portion of the profession. These objections chiefly are the inconvenience attending its use in private cases, and the alarming symptoms which occasionally arise directly from the cold bath, together with a feeling of distrust of the statistics which prove its usefulness. The last objection is so groundless since observations have multiplied so richly, that it needs no comment. On the contrary, the first two objections are practical ones, and it cannot be denied that in private practice, such treatment will often meet with disfavor from the patient and his friends, or that apparently alarming symptoms do, at times, not follow the cold bath. But the test of the value of the treatment is certainly the effect which it has upon the mortality and course of the disease, and the proof already accumulated in its favor is indisputable.

It is the duty of the medical profession to mould public opinion to views consistent with our positive knowledge of the subject, and when this is wisely done, generally it will be found that popular prejudice will rapidly disappear. In very many instances it will be found that the patient strenously objects to the disagreeable exertion required in the exercise of the bath, and only a wise

firmness on the part of the physician and attendants, will enable the faithful performance of the treatment. These are the purely practical objections which have to be overcome. Theoretically, the method of Brand is opposed to our old ideas of the treatment of typhoid fever. The movement and exertion required of the patient is totally at variance with common practice, and at first sight it seems actually cruel to so disturb the sufferer; but, taking into account the results obtained, there can be no doubt that the duty of the profession is to give it a fair trial.

For the benefit of those who may not be perfectly familiar with the method of Brand we quote the following description of it from an excellent paper: ("The treatment of enteric fever, with special reference to the method of Brand," by J. C. Wilson, M. D., Physician to the Jefferson College Hospital and the German Hospital, Phila. Read before the Lycoming county Medical Society, Williamsport, Pa. Nov. 4th, 1890. *Med. News*, Dec. 6th, 1890) by Dr. J. C. Wilson, of Phila. He says: Whenever the temperature taken in the rectum reaches 103.2° F. (39° C.) the patient is placed in a bath of 65° F. A compress, wet with water about five degrees lower, is placed upon the head, or water of a lower temperature is poured upon the head and shoulders. The patient remains in the bath fifteen minutes, during which time he is systematically rubbed by the attendants and encouraged to rub himself. At the expiration of this time he is removed from the bath, and wrapped in a coarse linen sheet over which a blanket is folded, the extremities being thoroughly dried and rubbed. A little wine or spirits is then given. This is repeated every three hours, unless the temperature remains below 102.2° F. The alimentation is liquid, nutritious, and carefully regulated. No drugs are administered."

This briefly and clearly outlines the technique of the treatment, and for a fuller account of the exact application of this systematic remedial procedure, the reader is referred to the complete outline of it, as contained in Dr. Wilson's paper, being quoted from Glenard, (*Le Bulletin Médicale*, Feb. 26, 1888,) who also says: "Alimentation should consist of the following articles: Milk, diluted with coffee or tea or cocoa, (a quarter of a litre at each administration;) thoroughly cooked gruel, oatmeal, tapioca, or vermicelli; veal, mutton, or chicken-broth, freed from fat when cold and re-heated at the moment of administration. As a drink, pure cold water should be given; the indication for wine or spirits is urgent only in cases that are subjected to this treatment late in their course."

Such, then, in brief, is the method of Brand, and so harsh does it appear, when contrasted with our ordinary treatment of typhoid fever, that only the most absolute proof of its beneficient action can convince the novice that it is entirely rational. It presents a most striking contrast to the expectant method of treatment, and to all the other modern modes of dealing with this disease, such as by antipyretic and antiseptic drugs.

What proof is there that the method of Brand is better than these? Since the paper of Dr. J. C. Wilson is the most complete we have seen upon the subject, we will quote, for the benefit of our readers a few of the statistics he has so admirably collected together, conclusively proving the reduction of the Hospital mortality of typhoid fever under the use of the cold water bath. Thus, in the combined number of cases treated in London Hospitals under other modes of treatment than cold water baths, the mortality, from a total of 13,936 cases, was 17.8 per cent., and in 27,031 cases collected by Dr. Murchison, 17.45 per cent. were fatal. Jaccoud found that 19.23 per cent. of 80,140 cases collected from European Hospitals, were fatal. Of 17,000 cases treated in the General Hospital of Vienna, the mortality was 22.5 per cent. In the English army the death rate varies from 24 to 40.7 per cent. Of 307 cases treated at the Mass. General Hospital, 13.5 per cent. died. The death-rate during our late war was 35.9 per cent. among white troops, and 55.6 per cent. among colored troops. In New York Hos-

pitals the mortality from 1877 to 1883 varied from 20.1 to 30 per cent. The foregoing cases were all treated by expectant or symptomatic modes of therapeusis.

Brand collected 19,017 cases treated by cold baths, only 7.8 per cent. of which died; and Vogl's mortality from 1875 to 1881, with 702 cases, was 7.6 per cent., the treatment being baths and internal antipyretics.

Following these are statistics of strict cold water bathing: Tesssier, 139 cases in 1887, with 5 per cent. fatal; Vogl, 420 cases, treated in 1880, 2.7 per cent. fatal; 141 cases from 1882 to 1887 gave 3.5 per cent; Brand, 2,198 cases, all treated by strict cold baths, 1.7 per cent. died, and omitting those not treated before the fifth day, the same figures give 2,150 cases, without a single death.

The above figures, are abstracted from a large number of the statistics found in Dr. J. C. Wilson's paper, certainly give us food for serious thought. The same author gives an interesting table of the mortality in 1889–90, in some of the chief Philadelphia Hospitals, where the cases were treated by expectant, symptomatic or antipyretic remedies, and the mortality varied from 12.5 per cent. in the Episcopal Hospital to 26.6 per cent. in the St. Agnes Hospital. At the Pennsylvania Hospital it was 16.1 per cent., while fifty cases treated by Dr. Wilson, at the German Hospital, gave a mortality of 2 per cent.; ten of these cases were treated with carbolized iodine, and the remaining 40 cases were treated strictly by cold water baths, the only death occurring being one of the number treated by carbolized iodine, so that of 40 consecutive cases treated by the cold water baths, all recovered. Dr. Wilson states that "severe symptoms were mitigated, and mild cases ran a most favorable course," and he also remarks that he modified Brand's method in two particulars: (1) "He took the temperature in the mouth instead of in the rectum. (2) Each case admitted prior to the tenth day, received one or two laxative doses of calomel."

Thus, we have seen from the figures quoted, the large degree of confidence which the strict cold bath treatment has inspired in different countries. To read some of the reported experiences, one would almost be inclined to the belief that it should always be adopted in any stage of the disease or condition of the patient. But the indication from available statistics, is, that the best results follow its early use in sthenic cases of the disease. There seems every reason for avoiding its use in the cases where the patient is not seen until the second or third week of the disease, and not even the brilliant array of statistics can yet convince us, that it is a wise procedure when there are grave pulmonary, cardiac or renal complications. Given a case in the third week of typhoid fever, with unusually deep ulcers almost ready to perforate, the conclusion is inevitable that the *strictly applied* system of Brand would be a dangerous treatment.

Any new treatment of undoubted value is universally too widely and indiscriminately applied without sufficient attention being paid to the selection of proper cases, and no doubt the proper limitations will after a while be found, within which this system of practice can safely be used. The inclination to doubt statistics is not without some reason when it is remembered that they rise and fall considerably in different periods, without reference to the treatment employed. From 1868 to 1882, in the Hospitals of Paris, the mortality was 21 per cent., from 1882 to 1888 it fell to 13 per cent., and in 1889 it rose to 14 per cent., irrespective of the mode of treatment. (Merklem, "The treatments and the mortality of typhoid fever in the Hospitals of Paris," *Bull. et. Mem. de. la. Loe. des Hosp.*, July 9th, 1890, p. 628.) Also, there is a marked difference in the two sexes, the mortality for women being higher.

While Dujardin-Beaumetz speaks in favor of the cold bath, (*Therapeut. Gaz.*, January 15th, 1891,) he prefers in his own Hospital practice, lotions, wet packs and tepid baths, and claims as good results as are obtained from the strict system of Brand. He further says: "I am a thorough opponent of systematization * * * For a disease

like typhoid fever, which presents itself under the most variable forms, we cannot admit a therapeutic formulæ which applies indiscriminately to all cases, and our treatment should vary according to the patient we have before us." The same eminent authority says: "I obtain with these tepid baths sedations of the nervous disturbances a sufficient fall of temperature, a state of freshness of the skin and general comfort, which enables the patient to get the needed rest." (*Ther. Gaz.*, January, 1890.)

Other papers giving very favorable testimony regarding the therapeutic value of cold baths in typhoid fever are available, and we might especially mention several of interest, including one by Dr. Sihler (*Cleveland Med. Gaz.*, 1890, VI., p. 193–208,) and two others, (*Jour. Am. Med. Assoc.*, 1891, XVI., 369, and *Practitioner, Lond.*, 1891, XLVI., 161–184,) but as they contain the same sort of evidence we have already referred to, we will leave their perusal to the interested reader.

While, from the evidence before us, the method of Brand has apparently lowered the mortality of typhoid fever more than any other single mode of treatment which we are aware of, still repeated experiences with it are in order so as to establish its exact value, and the best way of application of the cold water. So many conditions influence the course, duration and death-rate in this disease, (such as climate, season, and the physical and social status of the patient) that more statistics of undoubted veracity are needed to help us decide wisely regarding its true value. From the most encouraging reports which have followed the use of antiseptics in this disease, especially with the idea of influencing local conditions of the intestines which mitigate against the patient, we should think, that the combination of the local antiseptic treatment with the method of Brand should yield good results. If it is proven that the action of *cold* abolishes all those general symptoms referable to conditions of the nervous and vascular systems, under the stress of the bacillus of Eberth; and if it is equally proven that the maintainence of intestinal antisepsis removes all those dangerous local symptoms more effectually than other modes of medication, is not the inference that a combination of these two therapeutic measures would enhance their separate value, a natural one? However enticing such a theory may be, we are inclined to agree with Professor Dujardin–Beaumetz when he says in effect that any iron-clad system of treating typhoid fever is impossible, and that just as the disease now presents one indication and anon another more or less different and important, so should our remedies differ as we appreciate the demand of each case. The addition of the application of higher degrees of cold, than we have used for many years, is undoubtedly an advantage, but it will be a greater one when we know exactly how and why cold does good, and, therefore, be better prepared to wisely administer it.

Finally, we would bespeak for the cold bath treatment the earnest consideration, and the careful trial, which the importance of the subject demands. The saving of ever so few lives in every hundred cases means many thousands of lives of use to the world, and it is to be hoped that the system of Brand, if not perfection itself, will at least aid us to know more perfectly to what extent cold can favorably influence the course, duration, sequelæ and mortality of typhoid fever.

CORRESPONDENCE.

CLEANLINESS IN SURGICAL OPERATIONS.

(*Correspondence between Dr. Hiram Corson, of Plymouth Meeting, Pa., and R. Stansbury Sutton, of Pittsburgh, Pa.*

PLYMOUTH MEETING, 7–8–91.

DEAR DOCTOR SUTTON:

Thanks for your pamphlet, on "The Importance of Cleanliness in Surgical Operations." I have carefully read it. The profession is much indebted to you; for you were one of the first to show that it was not the carbolic spray that was the preventive of danger and death in abdominal operations—but that cleanliness was the essential. I have much pleasure in believing that the surgeons in America are as skilful and suc-

cessful as any others in any country; and since the issue of your paper years ago, have held you up as one who could reach success without other antiseptics than the cleanliness obtainable by the use of simple unmedicated water—but I have been confronted by the fact, urged against me, that you carbolized your instruments—I have regretted, and still do, that you did not try what could be done with merely using water in which to lay your instruments and for all other purposes. I feel sure that you would have been equally successful. On p. 8, speaking of Prof. Schröder, you intimate very plainly that the hazard of his operations is greatly lessened by the fact that "the peritoneum is but little exposed to the spray." But why did you not add, in your facile way of putting things, that he ought not to *endanger* his patients by even a weak spray. Don't you believe that any use of the antiseptics in contact with the peritoneum is dangerous? You do not, for on p. 9, you say, that "where hospital surroundings are not pure, it will be well to follow the antiseptic method." You do not doubt Lawson Tait—but do not go so far. I wish you would try cleanliness and nothing else. But on p. 10, you say: "There *are* many surgeons who no longer use Listerism." Why then use it at all? You properly give Lister credit for doing that which led to cleanliness, and I never wish to lessen in the least the honor accorded to him, but you admit that death has been caused by some of the antiseptics, but never by cleanliness. Would it not be safer to have the ligatures "submerged" in water, than in "a five per cent. carbolic acid?" The ligature touches the peritoneum. "In Europe, Listerism and cleanliness accompanying it, is seen everywhere." But do you think it necessary? Almost, No—I wish you could no without the *almost*.

We owe you much my Dear Doctor, but I do want you to put us under still further and greater obligations by proving to the world that cleanliness—the cleanliness that can be obtained by the use of water—is safer than cleanliness and Listerism combined. You have, doubtless, seen my paper on "Antiseptics in Mid-wifery." It is a paper that was written for our Society—the County Society—and without any expectation that it would go further. I could have made it stronger perhaps, but I am so old and forgetful now, that I ought not to write at all, not even this letter. If you have not seen it I will send a copy. I shall be most happy to read whatever may hereafter fall from your graceful pen. With kindest regards, sincerely your friend.

HIRAM CORSON,
Plymouth Meeting P. O., Pa.

PITTSBURGH, PA., July 11, 1891.

My Dear Dr. Corson:—Your kind letter of the 7th inst. is to hand. It was with great interest that I read your paper on "Antiseptics in Midwifery" in a recent journal. Facts are stronger than theories. In your letter just received, commenting upon my paper, "Importance of Cleanliness in Surgical Operations" read before the American Gynæcological Society at their meeting eight years ago this Autumn, you say that you have been confronted with the fact that "you carbolized your instruments." To assure you of that support, which you fear is not to be found, in my practice with reference to carbolic acid, I am glad to say, that for *eight years no carbolic spray has been used over any wound which I have made. No carbolic acid or other chemical has been used in the water covering my instruments, during operation, or been introduced into the sponge, water or overhead flushing bag during the same period. I have not carbolized a ligature for five years. The last carbolized ligature which I placed upon a pedicle came through the abdominal wall three months after the operation; it had been boiled in a five per cent. solution.* Eight years of constant experience have elapsed since I wrote my paper. Now I can say, that I know of no chemical solution which can fail to be injurious if introduced into the cavity of the abdomen, and that pure water at a moderate temperature is all that is required. After I close an abdominal wound I put on a top dressing of thymol or iodoform gauze, first having sponged off the surrounding skin with 1–2000 mercuric solution. Pin on a bandage and let it go for a week. Probably this chemical top dressing is not needed, but gauzes are clean and aseptic. The chemical is outside of the body, *where it ought to be*, and simply guards the open gate way. In total extirpations of the uterus I have deviated from my habit in abdominal sections. In the total extirpations, I have operated with the patient on her back, the trunk of her body, above the pelvis, elevated, and the pelvis still *further set on end* by a roll three inches in diameter placed under the small of her back. During the extirpation, a stream of 1–5000 mercuric solution has been playing into the vagina, and after the operation was completed an iodoform tampon has been put into the

vagina. In this position no fluid runs upward into the peritoneal cavity. But I should have said that in my last total extirpation the solution was 1–10,000. Do you observe, my dear doctor, the tendency to get rid of the chemicals here also? I will do it. The Listerian technique so far as it pertains to chemicals is abandoned, so far as it presages the importance of cleanliness it is retained, in my work, with the exception referred to. The results obtained in abdominal surgery under this seclusion of the Listerian technique have been good, by far the best ever obtained by any other operator in this city.

My institution, Terrace Bank Sanitorium, has just completed its eighth (8) year. It will reopen September 1st. With kind regards, and the hope extended that you may be spared to see the bacillus, only the little tail of pathology, made less of,

I am sincerely your friend,

R. Stansbury Sutton.

Book Reviews.

PHILADELPHIA HOSPITAL REPORTS. Volume 1. Edited by Charles K. Mills, M. D., Member of the Neurological Staff, Philadelphia, 1890.

We hail with pleasure the appearance of this, the first volume of the Philadelphia Hospital Reports. In an institution of such magnitude as Blockley, with a staff of physicians, surgeons, obstetricians, neurologists, optholmologists, dermatologists, pathologists, bacteriologists, etc.; each member of which, is an authority upon his special branch, the opportunity for valuable clinical study cannot be overestimated, and it is important for three reasons that such work shall be recorded in annual reports. In the first place, it encourages the members of a medical board to do more scientific work and study; secondly, the profession at large, is benefited by the experience gleaned from the pages of such a volume, and finally, the Hospital's interests are advanced both by the better records made and the wider knowledge given the public of the institution's work.

Abroad it is the general custom for the large Hospitals to publish annual reports, and the published volumes are replete with useful knowledge and with statistical and other papers, which have been quoted over and over again in medical works of the highest standard.

In the present initial volume of these reports, considerable space has been devoted to the history of the Hospital. Contributions in this line are furnished from such well-known writers as: Dr. D. Hayes Agnew, Dr. Alfred Stillé, or Lewis P. Bush, Dr. Chas. K. Mills and Dr. Roland G. Curtin. Valuable papers have been furnished by:

Drs. Roland G. Curtin, James B. Walker, J. H. Musser, F. P. Henry, W. E. Hughes, J. M. Anders, S. Solis Cohen, Wm. G. Porter, John B. Deaver, Ernest Laplace, E. E. Montgomery, Clara Marshall, Barton Cooke Hirsh, Edward P. Davis, Henry F. Formad, J. L. Hatch, Chas. K. Mills, F. X. Dercum, W. J. Hearn, Wharton Sinkler, T. J. Harris, C. S. Bradfute, J. H. Lloyd, A. J. Smith and G. E. de Schweinitz.

An interesting contribution from Dr. Roland G. Curtin is worthy of special note as bearing upon the history of epidemic diseases. It is entitled "Epidemics in the Philadelphia Hospital from 1862 to 1890."

The book is illustrated.

We earnestly hope that the Philadelphia Hospital authorities will continue the good work, so auspiciously begun, from year to year and we further wish that the example thus set, may soon be followed by the other large Hospitals in the United States.

THE MODERN ANTIPYRETICS: THEIR ACTION IN HEALTH AND DISEASE. By Isaac Ott, M. D., Easton, Pa.: E. D. Vogel: 1891.

This little *brochure* comprises within its fifty odd pages considerable new and interesting information as to several of the new chemical compounds that are being offered to the profession for their antipyretic value. Within this small compass the author has given a description of his human calorimeter, a study of the calorimetry of malarial fever, some important notes on the chemistry, physiological and pathological action, and on therapeutics of those coal-tar products that are of the class in question, and lastly, an interesting chapter on the "Value of Antithermics in Typhoid Fever."

Dr. Ott says "My experimental researches lead me to believe that fever is due to an agent from within or without, which deranges the harmony of the thermotaxic, thermogenetic and thermolytic apparatuses, by which, in the initial stage the metabolism of the tissues is usually temporarily increased, and this increment is usually greater than that generated upon a restricted amount of nutriment."

Those interested in the study of the relations between body temperature and disease will certainly find the volume highly entertaining, whether they agree with the author in his conclusions or not.

PERISCOPE.

THERAPEUTICS.

THE USE OF COCAINE AS AN ANÆSTHETIC.

At a meeting of the Académie de Mèdecine, on May 12th, the report of the commission appointed to consider M. Hallopeau's communication on cocainism (see supplement, December 13th, 1890, p. 84), was presented by MM. Panas and Magitot (*Bull. de l'Acad. de Méd.*, 3me Série, t. xxv. No. 19). After a review of the literature of the subject—confined almost exclusively to French sources—they cite the experience of M. Paul Reclus, who has performed more than 1,200 operations (removal of tumors, hydrocele, excision and erasion of joints, laparotomy, gastrostomy, strangulated hernia, etc.) without accident. M. Reclus finds that for mucus membranes the application of cocaine to the surface is sufficient, but if more profound anæsthesia is required it should be injected, not hypodermically, but intradermically. Care must be taken not to inject any of the drug into a vein; the injection should be made slowly, the quantity never exceeding 10 centigrammes, this amount being used only for extensive operations, and being administered in a series of injections at different points so as to embrace a wide surface. MM. Panas and Magitot, following in great part the teaching of M. Reclus, sum up their conclusions as follows: (1) Cocaine is an excellent local anæsthetic, which should on no account be banished from surgical practice. (2) It should, however, be used with the following precautions: (*a*) The dose should be proportional to the extent of surface it is desired to render insensitive, but should in no case exceed from 8 to 10 centigrammes; (*b*) cocaine should never be employed in persons suffering from cardiac complaints, chronic affections of the respiratory passages, or well-marked neurotic diathesis; (*c*) it should be injected *into* and not under the mucus membrane and skin; a 2 per cent. solution is the best; it should always be prepared fresh and injected with a sterilized syringe; (*d*) the patient should always be in the recumbent position when the injection is given, even if the head has to be raised afterwards; (*e*) the drug should be of the most absolute purity, and in particular free from any admixture of toxic alkaloids; (*f*) it should be given in divided doses, an interval of some minutes being allowed to elapse after the first injection of the first portion; this will give an opportunity of observing whether any untoward effect is likely to occur. (3) Used in this way cocaine has obvious advantages over chloroform, ether, etc., one of the chief being the possibility of operating without assistance. (4) The anæsthetic effect always lasts long enough to allow of the performance of "all the operations of ordinary surgery." In the discussion which followed the reading of the report M. Constantin Paul spoke of the internal administration of cocaine, pointing out that doses of 15, 20, and even 30 centigrammes could be taken in this way without danger. He said the intradermic injection was very painful. M. Laborde, while admitting that much larger doses could be taken by the mouth than could be safely given hypodermically, and that remarkable analgesic effects could thus be produced in cases of gastralgia, etc., and that he had seen serious accidents from the internal administration of large doses. The conclusions embodied in the report of MM. Panas and Magitot were adopted by the Academy.—*Brit. Medical Journal.*

INHALATIONS IN THE TREATMENT OF PHTHISIS.

The *Lancet* for May 23d says: "The history of inhalations in the treatment of phthisis is not an encouraging one. They have been widely employed and hailed as the most rational and effective mode of assailing the disease at its seat. But the results of this method of medication have not been commensurate with the expectations excited by it, and we imagine that of late it has been gradually falling into disfavor and disuse. Several potent objections have been urged against the method. First, it has been denied that the various antiseptic and germicide agents applied by inhalation succeed even in reaching the seat of the disease—viz., the submucus tissue of the bronchial mucus membrane—but are arrested often in the pharynx, oftener still in the larynx. Then it has been shown that, even assuming that the medicated atmosphere produced by one of the ordinary inhalers really reaches the seat of the disease, its impregnation with carbolic acid, creasote, thymol, or other such agent, is so exceedingly feeble as to leave no

solid ground for anticipating serious benefit from its use. Further, many authorities urge with much force that if the phthisical patient be taught to rely upon inhalations the inevitable result will be a life of indoor invalidism and constant tinkering with his inhalers—a mode of existence sure to effect an amount of mischief more than sufficient to counterbalace the problematical advantages of inhalation.

"There is much weight in the above objections, and until they can be satisfactorily met, the place of inhalations in the therapeutics of phthisis can not be an important one. Professor Germain-Sée, in a recent paper presented to the French Academy of Medicine, has sought to overcome the first of the objections to which we have made allusion—viz., the failure of the medicated atmosphere to reach the actual seat of the disease. He recalls the researches made at various times into the action of creosote upon tuberculosis. This drug has had a remarkable and somewhat checkered career. Discovered in 1832 by Reichenbach, its true composition was first made known in 1853 by Gorup-Besanez, who showed that it consisted mainly of two substances—gaïacol and créosol. It was in 1877 that Bouchard and Gimbert conceived the idea of its possible utility in phthisis, and made trial of it both *per primam viam* and hypodermically. Later, Fraenzel and Sommerbrodt in Germany made extensive trial of creasote, and reported benefit from its use. Guttmann, in his researches in the year 1889, found that the saturation of the system with creasote arrested the development of the bacilli, and suggested that the best means of bringing the system thoroughly under the influence of the drug would be to submit the patient to an atmosphere saturated with creasote under pressure. This is also the method recommended by Professor Germain-Sée. He describes it as follows: "The patient is shut up in a metal chamber, hermetically closed, and compressed air, passed through creasote and eucalyptol, is made to enter slowly. The air in passing through these liquids is saturated, and arrives charged with a large quantity of these medicaments. The pressure must be slowly increased, and should not exceed a half-atmosphere. The speed of delivery of the air saturated with the medicated vapors is from fifteen to twenty cubic metres per hour for a space of five cubic metres of capacity. The length of time the patient remains in the chamber is usually two hours, sometimes three or more, and no inconvenience ensues as the result of this proceedure. The inhalations are made daily or more frequently.

"Professor Germain-Sée has tried this method in twelve cases, of which one was a case of apical bronchitis, a second was a case of fœtid bronchitis, and the remaining ten were genuine cases of tubercular phthisis —all of which, with one exception, had arrived at the stage of softening. The results obtained would appear to be surprising, a marked amelioration being in most cases observable, not only in the amount and character of the expectoration, but in the general constitutional condition, and in some cases, though not in all, a corresponding improvement in the physical signs. Contrary to what might seem probable, hæmoptysis was not only not excited, but seemed controlled by this mode of treatment, and the appetite and digestion were improved rather than otherwise. Hectic fever was also diminished. Naturally, the least improvement was manifested in the physical signs, but Professor Germain-Sée is inclined to hope that by this new method the disease, if not cured, may be at least arrested, and further progress prevented. Benefit was obtained in some cases in a fortnight, in others the treatment was kept up for three months. Very great benefit was obtained in some cases of scrofulous enlargement of the cervical glands.

"At the present time it is hardly necessary to emphasize the necessity for extreme caution in admitting the claims of any new alleged remedy for tuberculosis, and the evidence before us in the present case, although interesting, falls immeasurably short of demonstration. Further trials will no doubt be made, and the results will be awaited with attention. One benefit, somewhat negative in character, may even now be derived from Professor Germain-Sée's researches—viz., the realization of the utter futility of the methods of inhalation so long adopted, and the uselessness of the inhalers now commonly employed. If inhalation is ever to become a valuable agent in therapeutics, it will probably be by the adoption of some plan analogous to that sketched above, and, according to our present knowledge, the most hopeful medicament with which to experiment would seem to be creasote."

SOLUBILITY OF NEW MEDICINES.

The following table of solubilities of some new medicines may be useful to some of our readers:

One Part of	Is soluble in		
	water.	alcohol.	ether.
Antifebrin	200	10	10
Antipyrin	1	1	50
Antithermin	Slightly sol.	Slightly sol.	Slightly sol.
Cocaine hydro.	5	10	—
Iodol	5,000	3	1
Paraldehyd	10	—	—
Pyridine	1	1	—
Quinoline tart.	80	150	—
Resorcin	1	1	—
Salol	—	5	5
Thallin (sul.)	7	100	—
Thallin tart.	10	—	—
Urethane	1	0.6	—

—*Phar. Record.*

TRIGEMINAL NEURALGIA AND IODIDE OF POTASSIUM.

In the last number of the *Neurologisches Centralblatt* reference is made to some interesting facts related by Dr. S. Ehrmann as to the occurrence of severe facial neuralgia after the administration of even small doses of iodide of potassium. In the first case mentioned the patient, a strong working man of thirty-five, suffered most intense pain in the forehead and in the teeth, with sensitiveness over the whole distribution of the fifth nerve, after taking fifteen grains of the drug. A second patient after taking thirty grains had much pain in the region of the upper jaw, with pain and tenderness in separate branches of the nerve, and also œdema of the eyelids on the left side. A third and a fourth patient also suffered from similar symptoms after similar doses. There were associated in all the cases with much lacrymation and injection of the conjunctiva, but the symptoms rapidly vanished, and did not reappear on a further administration of the drug. The cases are not only interesting, but important, for it is desirable to know as much as possible regarding any peculiar effects likely to be produced by a drug which is so frequently administered as an iodide of potassium.—*Lancet.*

URETHRAN IN TETANUS.

Dr. G. Maresti (*Raccoglitore Medico*, Sept. 30, 1890) was called to see a case in which he made the diagnosis of rheumatic tetanus. The temperature was slightly above the normal; the pulse 120. Darkness, complete rest, chloral and subcutaneous injections of carbolic acid were without effect. It was finally ascertained that about fifteen days before, the patient had injured the big toe of his right foot, the skin being torn off in a spot. The diagnosis was changed to traumatic tetanus; local treatment was instituted (curetting of the lesion on the big toe, and a solution of phenic acid (30), and corrosive sublimate (3) in water (1000) was applied topically). Chloral was given three times a day, the daily amount being six grammes. The chloral was given for twenty days. Complete resolution of the opisthotonus was thus obtained, yet there remained a slight degree of trismus, with some rigidity of the pectoral and abdominal muscles. The writer then substituted urethran for chloral, its use being suggested by Prof. Coza, who remarked its manifest antagonism to the convulsions produced by strychnine, and hence recommended it in the treatment of tetanus and convulsions. The remedy was first given in the dose of two grammes a day, and finally carried up to three grammes, with total disappearance of the tetanic symptoms.

The writer claims this to be the first case of tetanus in which urethran was used.—*Jour. Nerv. Ment. Dis.*

HYPNOTIC ACTION OF ATROPINE AND DUBOISINE.

Dr. Ostermayer, of Buda Pesth, draws the following conclusions from a number of experiments made on the action of atropine and duboisine: 1. Atropine in doses of $\frac{1}{64}$ to $\frac{1}{32}$ of a grain is an undoubted sedative in maniacal cases and is indirectly a hypnotic in so far as the reduced reflex irritability which follows its administration tends to favor sleep. 2. It is not to be compared with the safe and prompt action of hyocine in this respect, although the amount of depression which follows its use in medium doses is much less likewise than that which is caused by hyocine. 3. From repeated employment the organism becomes habituated to its use and the effects become accordingly less, or even may be entirely absent. 4. Unfavorable complications, with the exception of vomiting and diarrhœa in one case, are never observed. 5. Atropine frequently has, in the author's hands, succeeded in producing a sedative effect where hyocine and morphine had proved entirely inert.

From the above it would appear that atropine in certain cases may perhaps possess some sedative properties, yet there is so much to be said on the opposite side of the question that it is doubtful whether its use will ever become general. As regards duboisine, the author concludes that, in excitable conditions and various mental affections, duboisine is comparable to hyocine, and is free

from any of the objections which may be urged against the use of the latter. 1. sedative action of duboisine may be observed within ten or fifteen minutes after the injection. 2. Duboisine's prominent action is a sedative one, and sleep ordinarily follows within twenty to thirty minutes after its administration. 3. In states of extreme excitement $\frac{1}{32}$ grain to $\frac{1}{24}$ grain are required in simple insomnia, and $\frac{1}{64}$ or $\frac{1}{40}$ grain will usually suffice. 4. Symptoms of poisoning or unfavorable effects were never noticed. 5. The action of this remedy becomes weaker under prolonged use. The remedy was used by the author in 1 per mille solution.

The author likewise claims that the system becomes habituated to the use of hyocine as is the case with atropine and duboisine. In fact, he seems to regard duboisine as quite as useful a remedy as hyocine, as regards its activity, and preferable to it on account of its greater cheapness.—*Therapeutic Gazette.*

MUSIC IN THE TREATMENT OF NERVOUS DISEASES.

Among the accessories of directly medicinal treatment, and side by side with such health-promoting agencies as rest, exercise, and change of surroundings, a definite place is due by right of its character and history to music. It is true that in later, as well as in earlier times, the sister art has been associated rather more with what is mythic and visionary in medicine than with its accredited or scientific practice. Miracle workers, mystics, and charlatans have in all ages made much of its influence on the minds of the impressible, whether truly suffering or not. There can be no doubt also that they have, as a class, been indebted in no small degree to their appreciation of this and the like natural aids for an apparent mastery of physical effects too commonly imputed to other personal and mysterious gifts of healing. In this respect they may teach us a lesson. The possession of a refined musical taste or a so-called " ear " may be denied to many persons. Some conception of harmony is probably almost universal. This understanding differs, as it must, with different minds and moods, but it exists in some degree and form, we should say, in every human being. Each temperament knows and could show, if intelligence and language were adequate, the terms of its own simplest musical coefficient, and perhaps even some of its remembered variations. The cheerful rhythm that lightened for him an hour of gloom, the flowing cadence that absorbed his petulent irritation, are as the kindred spirits of a man's family. What wonder, then, if music be found equal to the treatment of some of his diseases—those, namely, which concern his mental and nervous condition. In connection with this subject Dr. G. H. Lilley sends us a short and interesting paper on the Therapeutics of Music in Mental Diseases. He discusses with considerable force the effect of this ancient remedy on those disorders of nutrition which explain so many departures from the normal health of mind and body. A brief and lucid argument illustrates the close resemblance in physiological action between music and other stimuli which regulate the vaso-motor activity employed in tissue nutrition. Some general observations on the mode of applying the treatment suggested are likewise worth reading, and the paper as a whole forms a useful and practical, if somewhat irregular, contribution to the hygiene of the nervous system. —*Lancet.*

ADVANTAGES OF PHENACETIN OVER OTHER ANTIPYRETICS.

Dr. M. B. Herman, in the *Memphis Med. Monthly,* says, that in phenacetin we have a reliable and valuable antipyretic and analgesic, possessing advantages over antipyrin and acetanilid in that it is

1. Less toxic.
2. It seldom if ever produces cyanosis, collapse or rigor.
3. It does not produce nausea or vomiting —nor the scarlatinaform rash of antipyrin.
4. It is tasteless.
5. The administration is unaccompanied by unpleasant after effects.
6. It requires two-thirds less than antipyrin to obtain the same effect.
7. It is cheaper, being unprotected by patent.

MEDICINE.

SUBCUTANEOUS EMPHYSEMA FOLLOWING BRONCHO-PNEUMONIA.

Professor Damsch, of Göttingham, contributes a paper to the *Deutsche medicinische Wochenschrift,* No. 18, 1891, on the subject of subcutaneous emphysema, and gives details of a case in which the condition was set up in the course of broncho-pneumonia. He points out that its occurrence in association with disease of internal organs is extremely rare. It is generally produced during some act of respiratory effort, such as

straining, prolonged crying, violent vomiting, etc., but is commonly found to be limited within the alveolar or subpleural tissue of the lung itself—the so-called interlobular emphysema. This condition is not always productive of diagnostic signs, unless it spreads to the mediastinal tissues. Children are on all hands admitted to be more liable to rupture of the pulmonary alveoli than adults, but almost all writers agree that simple whooping-cough, unless accompanied by tuberculous or inflammatory disease, is hardly ever productive of subcutaneous emphysema. The latter has been produced by phthisis, especially where tuberculous ulcers are present in trachea or bronchi, and by other forms of disease tending to weaken the bronchial walls. The air, as a rule, passes from the mediastrinum to the surface along the course of the great vessels. A case is recorded in which a gradually progressive condition of subcutaneous emphysema affecting the left half of the head, face, and body, showed itself in an infant aged 15 months in the course of broncho-puenmonia of both bases. The emphysema attained a degree described as "monstrous," but the child did not appear to suffer from it, becoming quietly somnolent until its death. On examination, it was found that extensive interstitial emphysema was present over the upper lobes of both lungs, forming several rows of tiny subpleural bubbles, some of them as large as a bean. The rest of the lungs, except where consolidated by the broncho-pneumonia, were somewhat dry and anæmic. The tissues of the mediastinum were emphysematous, but the pericardium was free, and the air was found to have reached the surface by the usual route.—*Brit. Med. Jour.*

MORBID ANATOMY OF PARALYSIS AGITANS.

Dr. von Sass (*St. Petersburg, Med. Woch.*, Nos. 19 and 20) furnishes a contribution to the *morbid anatomy of paralysis agitans.* He prefaces the history of his case with a review of what has been observed post mortem by Parkinson, Scoffela, Hall, Cohn, Lebert, Skoda, Virchow, Ordenstern, Leyden, Bourillon, Rosenthal, Joffroy, Charcot, Luys and others. As is well known, these eminent observers have furnished reports of lesions most diverse in character and point of localization, many of the changes noted being either purely accidental, or else the result of those senile degenerative processes, that occur so frequently, without producing any of the characteristic tremors. The fact that this disease is essentially confined to the most advanced periods of life, when the retrograde changes of nutrition are everywhere more or less manifest, renders it difficult to isolate the characteristic lesion. Sclerotic changes, affecting now the white matter, again the grey matter of the cord, pons or basal ganglia, diffuse or circumscribed as the case may be, seem to be the most common pathological changes. The author makes no claim that he has solved the vexed question, and frankly confesses his own disappointment at the unsatisfactory result of the careful investigation. Nevertheless, considerable credit should be his due for the very full and interesting report he has furnished, both of the clinical history and the microscopical investigation of the nervous system. None but those who have followed similar studies can properly estimate the amount of time and labor involved in a histological review of the cerebro-spinal axis, peripheral nerves and muscle fibres; each case thus studied deserves to go on record.

The patient, a woman, aged seventy-one, had complained of muscular tremor for twenty years. The history and symptoms were characteristic, and the only remarkable feature was the increase of the tremor during voluntary movements; this, as Charcot has shown, sometimes occurs in the last stages. Aside from partial obliteration of the cerebro-spinal canal, abundance of the corpora amylacea at all levels of the cord, and some arterio-sclerosis, there was nothing abnormal in the cord; however, the peripheral nerves and muscles showed decided alterations. In the brachial plexus there were seen thickening of peri and endoneurium, a diffused proliferation of connective tissue with increase of nuclei, atrophy and partial appearance of nerve fibres, with coagulation of myelin, and thickening of the blood vessels. In the muscles the fibres had everywhere undergone some atrophy, so that they appeared smaller than normal, and the sheaths were crowded with nuclei—evidently a chronic myositis.

The author calls attention to the fact that, with the exception of Leyden and Skoda, no observer had made any effort to examine either the peripheral nerves or voluntary muscles; and, while not inclined to make all the symptoms dependent on these changes, he thinks they may be largely responsible for the clinical picture; and he would explain the neuralgic pains, that frequently precede the occurrence of tremors, as due to an actual neuritis.—*Cinn. Lan. and Clin.*

VARIETIES OF URTICARIA.

Dr. Beatty (*Brit. Jour. of Derm.*, May, 1891) describes a case in which a lady, aged 23, after suffering from urticaria, had a second eruption consisting of extremely irritable papules, from 2 to 6 millimetres in diameter. The papules after a few days became flattened first at the periphery, and then at the centre; brown pigmentation took place at the periphery, and the centre became pale. The papules did not develop as wheals, but were independent of them. They remained itchy for a long time, and, some of the old pigmentary spots, having for a time ceased to be irritable, became irritable again. A few elongated patches formed, with a pigmented periphery and white elongated centre. The papules continued to appear after the wheals had ceased to form. Dr. Beatty associates the case with two cases previously published by him in the *Trans. Acad. Med. in Ireland*, vol. ii, p. 37, 1884, and considers that urticaria associated with pigmentation may be divided into three groups—namely, urticaria pigmentosa; ordinary urticaria, or urticaria papulosa of children, followed by temporary brown pigmentation; and urticaria, in the course of which occur, sometimes quite independently of the wheals, extremely itchy papules, which on subsiding leave either pigmentation only, or more commonly a zone of brown pigmentation, with a white pigmentless centre. These papules continue to come out after the wheals have ceased to appear. The pigment may eventually disappear, and white pigmentless spots remain. The disease may occur after childhood.—*Brit. Med. Jour.*

NORMAL ALBUMINURIA.

Few, if any, insurance companies will accept a risk, if albumin has been demonstrated to exist in the applicant's urine, and while the examining surgeon may personally be convinced of the trifling nature of the cause which has produced the trace discovered, the company considers it inexpedient to discriminate, and hence places all such cases in the same class as undesirable.

Undoubtedly albumin can be found in many instances where nephritis does not exist and where it does not subsequently develop, and much injury and injustice is done to those who are unfortunate in one sense and fortunate in another, as the victims of temporary, cyclic, regularly or irregularly intermittent, or any other form of benign albuminuria. These individuals are the victims of a science which goes far enough to discern the signal, but is not in every instance able to make out whether it is really a signal of danger. So important is this question of the forms of albuminuria which are not of necessity dangerous to life, that everything bearing upon it should receive careful consideration.

Senator ascertained to his own satisfaction that there was a "physiological albuminuria" some nine years ago, and believed that the source of the albumin is the epithelia of the urinary passages, and of the tubules of the kidney which undergo periodical desquamation.

The difficulty of demonstrating the slight amount of albumin present in health, lies in the fact of its high state of dilution. Posner has proposed a method of detecting the presence of small quantities of albumin, which is a modification of the process advanced by him in 1886, and which consisted in the free addition of acetic acid to the urine, which converted the albumin into a non-coagulable acid-albumin. After evaporation and filtration the albumin is made apparent by the ferro-cyanide of potassium.

This he has modified as follows: Precipitate with alcohol, wash the precipitate with hot alcohol, then with cold ether, and throw upon the filter boiling concentrated hydrochloric acid. If albumin is present on the filter a beautiful violet color is obtained.

Pavy has given an excellent description of the transitory albuminuria tending to recur in a cyclical manner, and many have since added their observations on this interesting phenomenon.

It is now quite generally accepted that the condition may arise from dietetic causes as well as from muscular exercise, and some observers, among them Falkenheim, have found it in certain individuals always following rest in bed. In one case lying upon the left side produced a marked increase in the albumin, due it was thought, to compression of the renal veins by a large spleen.

Dr. Lewis, of Hartford, has found that although from six to ten per cent. of persons who apply for life insurance have more or less albumin in their urine, still the mortality rate "both of selected lives and the general public" rarely exceeds 3 per cent., from which he infers that only about 30 or 40 per cent. of albuminuria cases terminate fatally. While it is well to bear in mind the possibility of albuminuria without nephritis, we must not fall into a habit of regarding the presence of albumen as trivial and thus overlook the really serious cases.—*Med. Record.*

TRAUMATIC NEUROSAL PEMPHIGUS.

R. F., aged 17, a well-nourished bright-looking girl, had suffered from fits of an epileptic nature, brought on by a fright at school, from childhood. In December, 1887, while cutting wood, she chopped off the distal phalanges of the index and ring fingers, and cut through the middle phalanx of the middle finger. She was taken into the Cottage Hospital at Sevenoaks, which she left in a month with the wounds unhealed; they remained open for three months. Shortly afterwards patches of redness followed by blebs appeared on the left wrist, hand, and arm. The eruption was peculiar from the rapid way in which it spread; sometimes in a quarter of an hour the whole hand and arm would be covered with large blebs, which would burst and give out a thin sticky watery discharge, which on drying would leave the surface of the skin of a purple or bluish tint. The circulation also seemed very feeble.

In February, 1889, she had a crop of these on the left leg. Up to that time she was rarely without a series of blebs or threatening of them for quite twelve months. Various remedies, principally arsenic and iron, with external applications, were tried without effect. I admitted her into the Norwood Cottage Hospital, and having found the puckered cicatrices of the ring and middle fingers, especially the latter, very tender, I amputated the stump just beyond the proximal joint of the middle phalanx.

In March, 1889, she had a much slighter return of vesicles, and in August of the same year, a single vesicle, after being at the seaside, since which she has had no return. At this time a small fragment of bone worked out of the dorsal surface of the wrist.

The vesicles in this case occurred in irregular patches upon both the front and dorsum of the forearm, in the area of distribution of both the median and the ulnar nerves. That the irritation was reflex is rendered probable by this scattering of its effects and the occurrence of the disease on the leg of the same side, as well as its cessation after removal of a source of irritation upon the median nerve alone.

A microscopic preparation of the scar on the amputated portion, kindly made by Mr. H. G. Plimmer, shows hypertrophied papillæ with new small cell inflammatory growth round vessels and nerves extending in all directions.

June 8th. Since the above was sent for publication, a slight return of vesicles has occurred and may probably require an operation upon the other finger. She has been quite free for eighteen months.—Dr. John H. Galton, in the *Brit. Med. Jour.*

ON SOME POINTS IN THE PATHOGENESIS OF AURAL VERTIGO.

Dr. Oren D. Pomeroy communicates through the *New York Medical Journal* a paper which is not intended to enter into all the causes of vertigo, but only those associated with diseases of the ear, and these are drawn principally from the experiences of the writer. It is probably safe to say that vertigo depends on cerebral and spinal disturbances; on some fault with the eyes, including any or all of its muscles, or the condition of the optic nerve; on ear affections; on stomach disorders; or any other source of peripheral irritation which acts on the co-ordinating center. The twenty-four cases illustrating this subject are taken from his private note-book.

The cases may be summarized thus: Vertigo was the result of eye or ear trouble or brain tumor in 1 case; of suppuration of middle ear in 1 case; of labyrinthine disease from traumatism in 3 cases; from sunken membrane in acute middle-ear catarrh in 1 case; from labyrinthine disease or sclerosis of middle ear in 1 case; from acute suppuration, and possibly labyrinthine disease in 1 case; from Ménière's disease in 2 cases; from suppuration and polypi in 3 cases; from sunken membrane in chronic aural catarrh in 5 cases; from labyrinthine disease, secondary to middle-ear disease in 1 case; from sunstroke or labyrinthine disease in 1 case; from sclerosis in advanced middle-ear disease in 1 case; from syphilis, epilepsy, or middle-ear disease in 1 case.

It would seem by the above summary that a more exact statement might have been made as to the specific causation of the vertigo, but the writer used what acumen he was possessed of in estimating causations.

In the review of cases, only one is recorded as vertigo from advanced sclerosing processes of chronic middle-ear disease. This might be misleading, for Dr. Pomeroy is sure he has met with a considerable number of cases of vertigo in profound middle-ear deafness with no tubal obstruction. In such cases ankylosis of the ossicula, adhesive bands within the tympanum causing fixation of the stapes in the oval window, secondary contractions of the tensor and stapedius muscles, thickening and rigidity of the membrane of the round window, exhibit sufficient causes

for producing pressure upon the perilymph and consequent vertigo. Of late, operative procedures have been instituted for the relief of this condition—such as division of the tensor tympani, of the stapedius, perforation of the membrane, division of the posterior fold, etc,—but with little effect. More recently still, the membrane itself, with one or more of the ossicles, has been removed with the hope of relieving sources of pressure, or obstruction to the passage of audible tones, but with uncertain results. The general opinion of the American Otological Society at its meeting in 1890 seemed opposed to this procedure, although it was confronted by a single case of Dr. Burnett's, of Philadelphia, where removal of the drum membrane and malleus had completely relieved a patient of tinnitus and vertigo. Dr. Pomeroy conceives that such operations may be justifiable, though he should incline to reject all cases where bone conduction was weakened.

Vertigo may be observed in any form of *labyrinthine disease*, but Dr. Pomeroy believes, always in Méniere's disease.

Labyrinthine disease from traumatism very often exhibits vertiginous symptoms, as my cases show. In hyperæmia of the labyrinth from the effect of drugs, notably of quinine, there is very likely to be vertigo, although, where quinine is administered, there may be a middle-ear causation as well. In disease of the labyrinth which is secondary to middle ear disease we often observe vertigo. It is difficult to state precisely the mode in which disease of the labyrinth causes vertigo, but, in a general way, we may conclude that pressure has very much to do with it—pressure from hyperæmia or inflammatory products. Disorganization of the labyrinth would naturally disturb the function of co-ordination. The integrity of the semicircular canals would be affected by almost any form of labyrinthine disease, and we may give these canals whatever credit they may have in presiding over co-ordination. Vertigo from any form of organic labyrinthine disease is not to a great extent amenable to treatment. Absorbent remedies, like mercury and iodide of potassium, promise the best results, perhaps, of any.

In middle-ear disease the vertigo undoubtedly depends on pressure. In great hyperæmia of the tympanum, pressure on the labyrinth waters may easily be effected through the round or the oval windows. Collections in the drum cavities, the product of inflammation, may produce a similar result. Pressure on any part of the perilymph may disturb all the functions of the labyrinth.

The sunken drum membrane causes direct pressure on the vestibule, through the stapes, it being driven inward at its fixation in the oval window. The cases here reported show a direct relation between the obstructed tube and the vertigo. Treatment relieved the patient; but, on a relapse of catarrhal symptoms with obstruction of the Eustachian tubes, the vertigo returned.

Another cause of vertigo mentioned by Dr. Burnett, of Philadelphia—to wit, spasmodic contraction of the tensor and stapedius muscles, causing temporary hardness of hearing and vertigo—Dr. Pomeroy has no experience of, though he readily sees the possibility of such a phenomenon: pressure on the perilymph from indrawn membrane.

The cases also show great frequency of vertigo in aural polypi. In these instances it needs no demonstration to show that pressure is the cause of the trouble. In malignant tumors of the tympanum there is vertigo, with, perhaps, greater frequency than in ordinary polypi. Dr. Pomeroy has no record, but, to the best of his recollection, almost all of his cases of malignant disease of the tympanum have been accompained by vertigo. In these instances the tumor is likely to grow more rapidly, attain to a greater size, and consequently cause more pressure than in aural polypi. Other causes of aural vertigo may, perhaps, be mentioned here. Syringing the ear often causes giddiness, undoubtedly from violence inflicted on the labyrinthine fluids. Dr. Pomeroy once heard of a patient who fell to the floor from an attack of vertigo while administering a nasal douche, some of the fluid having entered the tympanum. Violent inflation of the drum cavity will sometimes induce a temporary vertigo.

In reviewing the work of neurologists, it is apparent enough that diseases of the internal ear figure principally as pathogenetic factors in vertigo. This Dr. Pomeroy believes to be a conspicuous error, as in his experience a much larger number of cases of middle-ear disease are concerned in the causation of vertigo than are those of the labyrinth.

Dr. Pomeroy was led to develop this subject as in the present article, from the fact that vertigo has often been regarded as evidence of brain or spinal disease, when an investigation of the auditory apparatus might have placed the difficulty elsewhere.

SURGERY.

THE OPERATION FOR INTUBATION OF THE LARYNX WITH REPORT OF TWENTY-TWO CASES.

Dr. Hal Foster in the *Kansas Medical Journal*, reaches the following conclusions as a result of a careful study:

Intubation of itself, performed with care, involves little if any danger to life. Accidents during the operation generally result from want of care.

It prevents asphyxia, and thus gives more time for the administration of remedies, and for the system ultimately to throw off the disease. It prevents laborious and rapid breathing and lessens exhaustion. It allows a free supply of air, and thus assists in the cure of the original malady. It is the supreme resource, and as the patient cannot be made worse by it, do not postpone it until there is but a forlorn hope even from it.

Persistence of the original disease, delay in the performance of the operation, and neglect afterwards are the causes of its failure. Operate early, very slowly, deliberately, carefully and without hurry. It is never too late to operate even though the child has stopped breathing, if life is not extinct, insert the tubes and perform artificial respiration. I have saved several children under just such conditions. If strangulation is the main symptom neither age, constitutional condition nor complications can furnish a contra-indication to its performance. It alleviates suffering; it mitigates all the symptoms; it obviates secondary complications; it never adds one element of danger to the original disease.

Statistics taken collectively show that nine-tenths of the cases which render the operation needful will suffocate without it. Performed early it snatches from certain death fully two-fifths of all the cases. No patient that dies after the operation would have lived if it had not been performed. When it fails to save life the relief afforded and the substitution for the most agonizing mode of death, strangulation, for one of the least, by asthenia, are sufficient to justify its performance.

OPERATION FOR OPENING THE POSTERIOR MEDIASTINUM.

In a recent communication to the *Société de Chirurgie of Paris*, Mr. Quenu described an operation he has lately devised, in association with M. Hartmann, for gaining access to the posterior mediastinum (*Revue de Chirurgie*, No. 3, 1891.) A vertical skin incision is made midway between the spinal border of the scapula and the vertebral column. After division of the exposed portions of the trapezius and rhomboid muscles, and displacement inwards of the outer border of the sacro-lumbalis, a portion of the entire thickness of each bone and about three-quarters of an inch in length is taken from the third and each of the two following ribs. An opening is thus formed nearly five inches in length, and extending from the first rib to the upper border of the sixth. Quenu states that by separating the sides of this wound one can see very clearly the whole of the posterior mediastinum and all the organs it contains. This operation, it is pointed out, is attended with more difficulty and danger on the right than on the left side, because, as was first shown by Braune, the pleura, which on the left side passes directly from behind forwards, insinuates itself on the right side between the œsophagus and the vertebral column in order to reach the aorta. Operative penetration into the posterior mediastinum might, it is thought, be indicated in disease of any organ contained in this part of the thoracic cavity, but is most likely to be needed in cases of impacted foreign body in the lower part of the œsophagus. The anatomical conditions in this operation are not favorable to removal of malignant disease of the gullet unless the growth is of very limited extent.—*Brit. Med. Jour.*

STERILITY OF PUS IN ABCESSES OF THE LIVER.

An unfortunate accident which, however, was unattended with any bad consequences, happened to a surgeon a short time ago, who was operating for the relief of a large hepatic abscess, about which there were no adhesions. The surgeon, M. Peyrot, had just withdrawn about two litres of pus from the abscess, and was proceeding to wash the cavity out when the hepatic incision disappeared from the field of operation, and it was only after much difficulty, and the expenditure of twenty minutes in manœuvring that it was again discovered. A certain quantity of pus had evidently escaped into the peritoneal cavity; nothing, however, followed this accident. No untoward symptoms occurred, and the patient made an excellent recovery. In order to explain the fact of the harmlessness of the pus, it is essential to recollect that Saveran and Neltee have shown that pus obtained from abscesses of the liver consecu-

tive to dysentery is usually sterile.—*Med. Press and Cir.*

STATISTICS OF BREAST AMPUTATIONS.

Terrillon, in a recent number of the *Bulletin General de Therapeutique*, publishes a practical paper on the immediate and remote results of a hundred cases of amputation of the breast performed by himself. They are divided into forty-eight cases of carcinoma with enlarged axillary glands; thirty-one of mixed growths, mainly sarcomatous; twenty-one of adenomata or cystic growths. Out of the first series, forty-two are dead, but recurrence has taken place in all of the remaining six. Of the second series, two only are dead; one of these lived eight years, recurrence taking place in the region of the scapula, the other lived four years, recurrence showing itself in the axillary region. Of the last series all the patients are alive. Thus, out of the whole number submitted to operation, fifty-six are still living, and forty-four were only benefited in varying degrees. With regard to the forty-four carcinomatous cases the following details may be given of the periods of their survival:—One patient lived seven years; two survived five years; four four years; five three years; eleven two years; twelve one year and a half; and lastly, eight less than one year. He remarks that recurrence seems to be the rule when, after removing the breast, it is found at the same time necessary to extirpate some of the axillary glands. The recurrence, moreover, most commonly takes place in the first years, that is, there is seldom survival beyond the seventh or eighth year. The paper includes various remarks about complications arising from the operation and the after treatment.—*Med. Press.*

PERMANENT ANTISEPTIC IRRIGATION.

Dr. E. von Meyer recommends this method of treating septic wounds, which he has successfully practised in Czerny's clinic during the last two years. It consists in placing the affected part in the metal tub, and keeping up constant irrigation by means of an irrigator provided with a spiral coil of perforated metallic tubing which acts as a "sprinkler." The limb is lightly covered with gauze, and suspended in the tub by broad bandages attached to hooks at the sides. The bottom of the tub is sloping so that the fluid can flow off readily through an opening connecting with a tube, which terminates in a vessel placed under the bed. The cases in which this method has been employed comprise:

1. Cases of general sepsis arising from subfascial phlegmons and septic conditions after fractures.

(*a*) Cases of progressive gangrenous phlegmons, of spontaneous origin or developed after compound fractures.

(*b*) Septic amputation stumps after intermediate amputations and resections.

2. Extensive lacerated and contused wounds, with marked gangrene and sepsis of the soft parts.

On the ground of the results obtained in these cases, the author presents the following indications for the employment of permanent antiseptic irrigation:

1. In all cases of fractures and luxations attended with suppuration, especially when the surrounding parts are phlegmonous, and distinct signs of commencing sepsis are present.

2. In all cases of deeply seated progressive phlegmons in which gangrene is likely to occur.

3. In all cases mentioned above in which resection or amputation has to be performed, owing to pronounced general septic infection, or for the treatment of septic amputation stumps.

4. In severe contused wounds in which a conservative method of treatment is selected, as soon as the integrity of the soft parts is threatened by gangrene, and the danger of a general septic intoxication is present.

For irrigation a number of antiseptic fluids have been proposed, but the best, in the author's opinion, is a 1 per cent. solution of aluminium acetate. In cases of septic and phlegmonous wounds the author also makes a liberal use of iodoform, to which he assigns an important part in the disinfection of septic wounds. The gauze layer should be changed twice every day, the wound carefully inspected, and all gangrenous fragments of tissue removed, so that the antiseptic solution comes in contact with a clean surface, washes away all pus, and penetrates the tissues. The drainage tubes in the wound must be carefully watched, for they become easily plugged with fragments of necrotic tissue. Unless all these details are attended to, no success can be expected from permanent irrigation; for the fluid then flows over firmly adherent necrotic portions, beneath which abundant pus stagnates. Permanent irrigation should only be discontinued when all signs of sepsis have completely disappeared, and the wound appears perfectly cleansed.—*Deut. Zeit. für Chir.*

NEPHROLITHOTOMY IN A BOY, AGE 10.

Mr. Bilton Pollard reported a case of a boy who during the past three years had been subject to attacks of abdominal pain associated with hæmaturia. The attacks of pain were not characteristic of renal calculus. The hæmaturia was sometimes profuse. The urine contained no pus, and when free from blood it appeared to be healthy. The right kidney could be felt, it was not tender on pressure and there was no renal tumor. The boy's general condition was good, although he was anæmic. On December 25th, the right kidney was explored through the lumbar incision at the North Eastern Hospital for Children. The stone could be felt in the pelvis of the kidney by the finger, and was also struck by the exploring needle. It was easily extracted through the cortex of the kidney. The stone weighed twenty-seven grains. The kidney bled rather freely, but the bleeding was stopped easily by plugging the wound in the kidney with gauze. The gauze was removed on the following day, and the tube on the second day after operation. No blood appeared in the urine after the operation, and as the discharge of urine from the wound did not diminish materially, the renal pelvis was again explored on the fourteenth day after the operation, as it was thought possible that it might be plugged with blood clot. No clot was found. A fine tube was passed in the direction of the ureter and some lotion syringed through it with the object of dislodging a clot if there was one impacted in the ureter. The quantity of urine which escaped from the wound now diminished quickly and ceased entirely after the fifth day, and the patient made a complete recovery. It was now sixteen weeks after the operation and the patient continued well. From inquiries which Mr. Pollard had made he thought nephrolithotomy was a rare operation in childhood. Mr. R. W. Parker had twice operated for renal calculus in children at the East London Hospital, but no cases of the kind had occurred in three other London children's hospitals, nor yet at the Pendlebury Children's Hospital. Mr. Pollard reported the case with the view of ascertaining the experience of others in regard to renal calculus in childhood.—*Med. Press.*

ABDOMINAL SECTION FOR ACUTE INTESTINAL OBSTRUCTION.

Jordan Lloyd (*London Lancet*) after giving the details of eight cases reaches the following conclusions:

1. In acute intestinal obstruction our attention should be primarily directed to the strangulation of the walls of the bowel rather than to the fæcal current. When strangulation exists immediate operation is demanded.

2. The ordinary text-book distinctions between obstruction in the large and small bowels are not always to be depended upon.

3. In all obstructions above the rectum calling for operation, median abdominal incision is the proper primary procedure.

4. When the abdomen is open the examination of its contents should be systematic and expeditious, the hand being introduced into the peritoneal cavity, if necessary, and if the obstruction is not quickly discovered, the most distended coil should be fixed to the skin and opened at once. If the large intestine is the part involved, the cæcum or sigmoid should be brought through a special opening made in either groin.

5. With proper precaution a few feet of bowel may be withdrawn from the peritoneal cavity, and returned without difficulty and without serious risk.

6. Rapidity of procedure with a minimum of disturbance are the essentials of operative procedure.

7. The number of lives saved by abdominal section will increase, as earlier and more accurate diagnosis comes to be made.

OPERATION FOR NASO-PHARYNGEAL POLYPI.

Baracz (*Centralbl. f. Chir.*, April 18, 1891) describes a method for which he claims the following advantages, namely, that it avoids much bleeding and enables the operator to get the growth completely away. The plan has, as he states, been employed previously by others, but has not met with the general acceptance which it deserves. It is principally applicable to those growths which cannot be removed by the forceps through the nostrils. Chloroform is not administered, but the part affected, together with the surface of the lips and nose, which has to be incised, is rendered insensible by means of cocaine. An incision is made through the lip just to one side of the middle line, and the incision is carried up through the fleshy part of the nose on one side of the septum as far as the nasal bones. Should the growth be very large the nasal bone may be cut and turned aside, along with the flap of skin, to the corresponding side of the face. This flap is grasped by an assistant, and the nasal aperture enlarged slightly by bone forceps if

necessary, though it is very rarely needful to do so. One finger can then be introduced into the nostril and another behind the soft palate, and the polypi enucleated with the finger nail. In children an anæsthetic must be employed. Baracz states that the whole nasal cavity, so far as the base of the skull, can thus be got at. If the cavity is well irrigated out afterwards the bleeding is not great. The edges of the wound are then accurately adjusted, and only a linear scar remains. Baracz claims that by this comparatively simple incison quite as much can be effected as by the larger-planned operations of Langenbeck and others.—*Brit. Med. Jour.*

OPERATIONS FOR PROMINENT EARS.

Monks (*Boston Med. and Surg. Jour.*, Jan. 22, 1891) discusses the treatment of this deformity. In his first case an attempt was made to reduce the prominence of the ears by keeping them pressed close to the side of the head by means of a spring passing over the top. This contrivance was faithfully tried for several months, but no great improvement could be seen. In the second case a vertical strip of skin and cartilage was taken from behind. The anterior surface was left intact. This operation was successful, although the cartilage took a long while to heal, and a vertical fold of skin was formed on the front aspect of the ear where the cartilage had been brought together. In three other cases an elliptical piece of skin was removed. The result was satisfactory. A girl of 5 years was similarly treated, and the result was satisfactory.

Operations by excision of skin and cartilage are only called for when the cartilage is stiff. It seems almost impossible to perform an operation on the cartilage which will leave no trace of undue prominence, scar or depression. The method by excision of the skin alone is applicable to cases where the cartilage is not stiff. The shape of the ellipse varies somewhat with the case, the strip being widest where the prominence is most marked. In all cases the inner incision should be close to the bottom of the culcus. As the cartilage tends to regain its old position after the operation, a broad piece of the skin should be resected; that is, a piece equal to more than half the breadth of the back of the ear. The sutures may be removed from the third to the sixth day. A bandage is to be worn for ten days or two weeks, and for several months a night cap should be used.—*Univ. Med. Mag.*

GYNÆCOLOGY.

GYNÆCOLOGY IN THE JOHNS HOPKINS HOSPITAL, BALTIMORE.

During a recent trip to Baltimore, Dr. J. E. Graham and I enjoyed the hospitality of our old friend, Professor Wm. Osler, and were also entertained by others of the leading medical men of Baltimore, whose cordial manner cannot help but foster warm and friendly feelings. Johns Hopkins Hospital is unique and must be seen to be appreciated. Though it is situated near a densely populated part of the city, where clinical material is abundant, it is so elevated that it commands a view of the city and suburbs. The Hospital buildings are so constructed that they give the most perfect sanitary results. The grounds are spacious and well kept. Everything seems so ordered that both the convenience of the medical men and the best interests of the patients may be served. Post-graduate work is only done. The teaching is thorough, and such a scientific atmosphere pervades the place that it cannot help leaving a favorable mark upon all who are fortunate enough to be able to avail themselves of its manifold advantages.

In the Hospital my time was chiefly occupied with work in the gynæcological department, under Professor Howard A. Kelly and Dr. H. Robb.

One is particularly impressed with the great amount and thoroughness of the work. From the out-patient clinic suitable cases are chosen, and the wards are filled with many patients demanding operative measures for their relief.

The wards are well lighted, suitably ventilated, scrupulously clean, and supplied with every convenience. The appearance of the operating room is unique, with its tiled floor, clean walls, brass table with glass top, instrument cases with glass shelves, wash basins, trays, vessels of glass of different color for different solutions, sterilizers, and glass bottles for cotton, bandages, etc., and in fact every appliance for convenience and perfect cleanliness.

Professor Kelly believes that the greatest difficulty is encountered in freeing the hands from infectious germs—the most harmful of which he takes to be the streptococcus aureus. In order to be sure of avoiding the baneful effects of these germs, he goes through and causes his assistants to adopt a most rigorous course. First, they dress in white duck for the operation. The hands and arms are bared, and after scrubbing for ten minutes

with soap and hot water, they are rinsed with pure water and soaked in a saturated solution of pot. permanganate, which is again rinsed off in distilled water, and then the brown color is removed by a saturated solution of oxalic acid, which in its turn is rinsed off in tepid distilled water. The instruments are wrapped in a towel, sterilized by steam, and placed in a glass tray under distilled water ready for use.

I saw some "hand cultures." After an assistant had washed his hands and soaked them in perchloride of mercury solution, some scrapings from under the nails were placed in culture media. In due time germs were produced, some of which, when injected into a rabbit, caused death. Dr. Kelly believes that perchloride of mercury solutions retard but do not absolutely prevent the production of poisonous germs, whilst saturated solution of permanganate of potash absolutely destroys the germs. The patients are prepared with as great care as the instruments and the hands of the operator. Ether seems to be used oftener than chloroform. I saw a good many cases of vaginal hysterectomy, all doing well. One was notable, as the operation was done for prolapse of the uterus, which was of such a marked character that no other plan of treatment seemed to offer a chance of relief from her distressing symptoms. Some of the hysterectomies were done for myomata, and Dr. Kelly believes that where the life of the patient is rendered unbearable by pain or disease caused by pressure from myomata, and when other treatment is unavailing, hysterectomy is justifiable. One case of cystic ovary was operated upon by Dr. Kelly in which the adhesions were so dense and general and the bleeding was so free that the cyst could not be removed without seriously threatening the life of the patient. He broke quickly through the adhesions of the pedicle ligated it, emptied the clots out of the sack and washed it out with warm water, drained and packed with iodoform gauze, with good result. In a case of subperitoneal myoma removed by Dr. Robb the omentum was attached, and its vessels so enlarged that, instead of separating adhesions, he tied off omentum, tied the pedicle and removed the tumor, after which he tied the pedicle again by cross stitches.

There were very many other operations of great interst to me. In dilating the cervix-uteri, Professor Kelly uses the dilators with repeated quick movements, changing the position so as to dilate evenly. In repairing lacerations of cervix, he cuts the scar tissue away very freely, and uses silk-worm gut with catgut for the superficial stitches. In lacerations of the perineum he does a very neat operation, using Emmet's curved scissors, and denuding higher up on the vulva than many advise. Catgut for the lesser and silk-worm gut for the deeper stitches are used. Glass catheters are preferred, as they are so easily cleaned.—*Albert A. McDonald in the Canadian Practitioner.*

RECTAL FISTULA AFTER PYOSALPINX.

Dr. Ozenne (*Revue Obstêt. et Gynécolog.*, March, 1891) recently had under treatment a patient, aged 30, suffering from chronic pelvic disease. Eight years previously salpingitis followed a forceps labor. The pus escaped into the rectum, and after three months' rest no more purulent material came away from the bowel. Six years later severe pelvic pains again set in, with symptoms of metritis and pyosalpinx. After many months of ill health the pus once more escaped into the rectum, this occurrence being followed by great temporary relief. At length the patient fell ill again. On examination a swelling could be felt in the left iliac fossa. The orifice of the fistulous tract was detected about 3½ inches above the anus. Dr. Ozenne believed that, seeing how long the pelvic disease had existed, abdominal section would entail great difficulties and dangers. He treated the patient by rest in bed and by vaginal injections of a 1 in 4,000 sublimate solution night and morning, whilst at the same time the rectum was washed out with about five quarts of a warm boracic solution, thrown up slowly so that it might be retained for some time. Every morning a boracic solution was thrown into the abscess, a double-channelled gutta-percha sound being passed into the fistula. Laxatives and tonics were given. At the end of a fortnight the patient was able to get up and lie on a sofa; the injections into the abscess were left off. For a month longer the enemata and vaginal injections were continued. The general health was completely restored, and the walls of the pelvic abscess had contracted. Eight months later the patient was still in good health, without any sign of recurrence of her pelvic troubles.—*Brit. Med. Jour.*

OBSTETRICS.

UTERINE IRRIGATION OR INTRA-UTERINE CAUTERIZATION.

Dr. Eichholz, in the *Frauenarzt*, gives statistics to prove that during epidemics of

puerperal fever the mortality was higher in cases in which intra-uterine injections were made than when they were omitted. In Gusserow's clinic, *e. g.*, the mortality was 3.8 per cent., the injections being used, and after they were omitted the mortality was reduced to 0.39 per cent. Breisky and Fehling made similar observations in 1877. E. claims that the injections are at times not only useless, but may be dangerous, for it is possible to bring infection into the uterus by introducing foreign material from the vagina. The injections have in many cases produced symptoms of poisoning. Steffek reports a case which ended fatally after the use of a corrosive-sublimate injection (1:5,000), in a woman who was delivered of a macerated fœtus in the fifth month, the symptoms of poisoning appearing one hour after the injection; the patient died on the seventh day. Maurer observed a case of poisoning due to an injection of carbolic acid. The author gives another reason to prove that the injections are dangerous, namely, the fact that the fluid enters directly into the venous system, and also that it may be carried into the system through the Fallopian tubes, as evinced by pains in the abdomen, general peritonitis, and death. Chrobak collected eighteen cases of death due to the use of intra-uterine injections of caustic fluids. He furthermore claims that we have to consider the amount of pressure used in injecting, as also the quantity. If the pressure is at all great, considerable irritation is produced; consequently there must be no pressure and the quantity must not be too great. He therefore concludes that it is better to make direct applications, and recommends the use of chloride of zinc (fifty per cent.) as practised by Rheinstädter: His method of employing the zinc is as follows: He introduces a Trelat's speculum into the vagina, carefully cleansing the external genitals and the vagina by means of cotton soaked in corrosive sublimate (1:1,000). The cervix is then drawn down and the canal dilated. Next he curettes the uterus, and then makes a uterine application by means of a brush—the thickest portion of which does not exceed five millimetres—dipped in chloride of zinc (fifty per cent.). The vagina is then cleansed again, and a cotton pad placed over the vulva and changed when soiled. The brushes are never to be used more than once. Author reports twelve cases of premature births treated in this manner with most excellent results.

He summarizes the subject as follows:

1. That uterine irrigation, used as a prophylactic measure or for therapeutic purposes, is not as valuable as is generally believed.

5. When we consider its inefficacy on the one hand, and its dangers on the other due to entrance of air and water into the vessels and tubes and the danger of poisoning, we must consider it preferable to adopt other methods.

3. This method can in the majority of cases be replaced by the application of $ZnCl_2$, as described by Rheinstädter. It is not as dangerous as is irrigation, and undoubtedly disinfects the interior of the uterus much more thoroughly.—*Exchange.*

THE PLACENTA IN ECTOPIC GESTATION.

The question of the growth of the placenta after the death of the fœtus in cases of ectopic gestation is not only interesting in itself, but may be important from a medico-legal point of view. It has long been suspected that the growth of the placenta must outlive the fœtus, for instances are common in which a large placental mass exists without the trace of an ovum, or at most with a fœtus obviously much younger in point of age. Recent observations by Mr. Tait and by Dr. Bantock have now placed this developmental survival of the placenta in occasional cases of this kind beyond a doubt. There remains, however, the interesting histological question as to how the placenta continues to grow. As has been pointed out by Dr. Barnes, the placenta is a double organ, consisting of a fœtal and of a maternal portion. *A priori* considerations would suggest that the growth must bear principally if not exclusively on the maternal portion, but microscopical information, which alone can settle the point, is wanting, though doubtless now that attention has been called to the lapsus, the requisite investigation will shortly be carried out. This fact, moreover, has a bearing on the treatment, for it would obviously be useless to kill a fœtus by electricity or other means leaving it *in situ* if the placenta is likely to continue growing, for rupture of the tube and hæmorrhage will as certainly follow as if the fœtus were present in person.—*Med. Press.*

TREATMENT OF SEVERE VOMITING OF PREGNANCY.

Dr. Amand Routh, after alluding to the difference between the vomiting *of* pregnancy

and the vomiting *in* pregnancy, noted the anxiety occasioned by severe forms of this condition, and the advantage of having an easy and efficacious mode of treatment in itself free from risk. Although it was now generally held to be reflex, and due to some local irritation at or near the os uteri internum, great difference of opinion existed as to the exact pathology and to how it was produced. The author did not think the vomiting was often secondary to displacement or incarceration, and showed that it occurred where no malposition existed, and that, even when vomiting occurred with misplacement, replacement did not cure it. The treatment by drugs, accessory measures, replacement, Copeman's dilatation, local applications of cocaine, counter-irritation, etc., was reviewed, and it was shown by several cases that painting the cervix and the end of its canal with iodine paint (equal parts of iodine, iodide of potassium, spirits of wine, and water) had, in the author's hands, never once failed in the last seven years, at once to stop the sickness, which might, however, begin to return from the fifth to the fifteenth day, when it was almost certainly permanently arrested by a second application. A prompt use of this remedy in cases threatening to become urgent would prevent the occurrence of the so-called "uncontrollable" or pernicious vomiting, which differed only in degree, and not in kind, from the milder forms. Induction of abortion would still be required when the vomiting was due to the presence *in utero* of a foreign body, such as a dead fœtus or a hydatid or fleshy mole, but might otherwise, by this proposed remedy, be avoided.

PÆDIATRICS.

A RECORD OF THE RESULTS OF FIVE HUNDRED AND TWELVE CASES OF INTUBATION OF THE LARYNX.

Bleyer has embodied in an interesting paper, which appears in the *Archives of Pædiatrics* for March, 1891, his observations made in an experience covering the above number of cases of intubation. In order to show that the operation has now attained a position which entitles it to recognition as a feasible and practical surgical procedure, he compares its results with those of tracheotomy. Of the 512 cases in which he performed intubation, thirty-seven per cent. recovered, while the most complete statistics of tracheotomy, those of Lovett, show the proportion of recoveries from that operation to be twenty-eight per cent. With regard to the details of the operation of intubation, Bleyer insists upon the necessity of a preliminary laryngoscopic examination, the performance of which will be facilitated, when the patient offers resistance, by the employment of a gag and tongue-tractor of his own device. The examination is of value, not only because it will reveal the nature of the affection for which the intubation is contemplated, but because, in cases of diphtheria or of croup, it will permit the operator to see and remove any loose membrane which might be pushed downward by the tube—a complication which the writer regards as the rule rather than the exception.

The matter of the selection of the size of the tube to be employed in a given case is one which requires some experience. It must be remembered that the size of the larynx varies considerably in different children of the same age.

Daily removal of the tube for the purpose of cleansing it from accumulated loose membranes and secretion was practised in many of the writer's later cases. He prefers that it should be accomplished by means of the two forefingers rather than the forceps. In a large number of the cases he found that the tube could be dispensed with after the second, third or fourth day. In a few cases its re-introduction was necessary.

By way of local treatment, irrigation of the nostrils with a solution of peroxide of hydrogen, one part to two of water, is recommended, a soft rubber catheter being used for the purpose. After the nares have thus been thoroughly cleansed, the pharynx and larynx are to be irrigated with a 1–8 solution of the peroxide of hydrogen, the patient's head being held forward over a basin in order to facilitate the escape of the fluid. These cleansing applications should be made every two hours. At the times of removal of the tube irrigation with a solution of bicarbonate of sodium, half an ounce to fourteen ounces of luke-warm water, is advised.

As to medicinal treatment, Bleyer speaks favorably of his experience with calomel, given in half-grain doses every hour. In the administration of food the stomach tube was, for the most part, employed. A source of danger, which is to be kept in sight in these cases, is an inordinate desire for fluids, the result, not of actual thirst, but of uncomfortable sensations caused by the presence of the tube. In five cases, through the

too frequent administration of liquids in response to the patient's appeals, death took place in consequence of mechanical obstruction of the heart from distension of the stomach.

As sequelæ of intubation, ulceration from pressure of the tube and alterations in speech are mentioned, the former having been met with in almost one per cent. of the cases; the latter may vary from partial to complete aphonia, but is always amenable to treatment. From a tabular statement of the results of the 512 cases it appears that of the patients under 3 years of age, 74 recovered and 197 died; while of those over 3 years old, 115 recovered and 125 died. The chief causes were extension of the membrane to the bronchi, bronchitis, pneumonia, sepsis and exhaustion.

In conclusion, the writer points out the advantage of intubation by means of a rubber catheter and the intubation tube over tracheotomy, in connection with operations upon the mouth or throat, when much hæmorrhage is anticipated—*Univ. Med. Mag.*

THE TREATMENT OF INFANTILE PARALYSIS.

The following is an outline of treatment of infantile paralysis recommended by Simon. At first counter-irritation over the spinal column at a point corresponding to the origin of the roots of the nerves affected. For this purpose the least painful agents should be chosen. The functions of the skin should be stimulated at the same time by means of baths of hot water or vapor, given in the bed. Chloral, aconite and canium may be employed to calm nervous excitement. After the first eight days, electricity should form the basis of the treatment. Simon uses a weak galvanic current, applying the positive pole to the shoulder and arm, the negative pole being placed in a basin of water in which the child's hand rests. The sitting should never last more than eight or ten minutes. At a later stage faradism may be used, always, with the greatest caution. Among drugs, nux vomica is of the greatest service. A drop of the tincture is given twice daily at the two principal meals. At the end of ten days, or earlier if indicated, the nux vomica should be replaced by arseniate of sodium, a sixty-fifth of a grain at a dose. The use of these two remedies alternately is to be continued throughout the case. Salt and sulphur baths are recommended, but only in the last stages of the disease. Above all, Simon enjoins us never to be discouraged, as the treatment must necessarily be very long.—*La France Méd.*

OCCLUSION OF DUODENUM IN A NEWBORN CHILD.

MM. Porak and Bernheim (*Bull. et Mém. de la Soc. Obstét. et Gynéc. de Paris*, No. 4, April, 1891) describe a case where a woman was delivered at the eighth month of a sickly female child. There was hydramnious, and over six pints of fluid came away during labor. There were two small fibrous deposits in the placenta. On the first day the child vomited dark matter, each attack of vomiting coming on about three-quarters of an hour after suckling. On the third day, as no meconium had passed, imperforate rectum was suspected; but a sound could be passed for over two inches up the anus. An enema was given, and a little meconium came away; but the vomiting continued, and the infant died on the fifth day. The stomach was found much dilated; the lower part of the large intestine was full of meconium, but the remainder of the intestinal canal was like a little packet of worms. The stomach communicated by a contracted orifice, apparently the pylorus, with a blind pouch which had no connection of any kind with the rest of the intestine, which terminated above in a blind extremity close to the pancreas, which opened into it. In a similar case reported by Crooks in 1828, the pancreatic duct opened into the pouch connected with the stomach. Luton described in 1855 a third case where that pouch communicated with the blind end of the intestine by a ligament. There was a similar breach of continuity between the large and small intestine. No trace of peritonitic bands could be seen in Drs. Porak and Bernheim's case.—*Brit. Med. Jour.*

HYGIENE.

THE TETANUS BACILLUS.

Guido Tizzoni and Giuseppina Cattani have recently published some new facts concerning the bacillus of tetanus, which may possibly reconcile some discrepancies between their observations and those of Kitasato. They find (*Riforma Medica*, 1891, p. 157) that virulent cultures always liquify gelatine, have a decidedly alkaline reaction, give out

a disgusting odor, and cause death by acute tetanus in animals in twenty-four to thirty-six hours. Less virulent bacilli still liquefy gelatine, but the reaction soon becomes acid. Still more attenuated cultures show growth much sooner, give off far more gas, do not liquefy the gelatine, give out no bad smell, and have a marked acid reaction. Thus to various grades of virulence correspond notable alterations of the morphological and cultural relations, also of the products, and we here again observe the strict tie which exists between peptic enzyme and the toxine of tetanus bacilli. As to cultures in serum, observers differ. Kitasato has not seen the liquefaction of coagulated blood serum, which has now been noticed by several observers besides the above. Again, as regards liquid serum, its successive solidification and liquefaction by the tetanus bacillus, as first noticed by the authors, has been confirmed by Nikiforoff (*Zeitschr. f. Hygiene*, Bd. 8, p. 497.) The differences are possibly explained by assuming that Kitasato worked with a less virulent bacillus. The authors have already shown that cultures on meat broth and agar are weakened even in the second generation ; the same weakening follows culture in other media, only after a long interval of some months. Cultures kept for more than a year under various gases (H. N. Co_2) gave attenuated cultures when transplanted into gelatine, but similar cultures *in vacuo* yielded very virulent cultures. Perhaps this was due to freer development of gas by the cultures *in vacuo*. The acids of attenuated cultures are fatty acids, chiefly butyric, as already shown by Kitasato and Weyl, but the addition of butyric acid made no difference to the culture; the acidity is thus a consequence rather than a cause and the fact that it is due to fatty acids, and its small amount, explain why it does not annul toxicity as mineral acids do. Virulent gelatine cultures continued to be very toxic for six months when filtered and kept in the dark, but after that time they lost their virulence altogether, or only caused emaciation and death in about three weeks. They were strongly acid and odorless. In contrast to this, the toxalbumen of tetanus, kept dry for a much longer period, preserved all its toxicity.—*Brit. Med. Jour.*

PRACTICAL INSTRUCTIONS FOR PUBLIC HEALTH DIPLOMAS.

Sixteen different examining bodies in the United Kingdom have formulated regulations for examinations in Public Health. Naturally enough, there is considerable variation in the standards and range of subjects required, and still more in the manner in which they are specified. The recent resolutions of the General Medical Council—making laboratory training and practical sanitary work imperative upon candidates—have led to further modifications in the synopses issued by the examining boards, and, as the Education Committee of the Council pointed out in the report discussed at the meeting on Saturday last, "there is difficulty in understanding what the whole of the regulations under which some of the authorities grant the diploma in Public Health really are." The difficulty is one with which the teaching bodies and intending candidates for these diplomas are only too well acquainted, although perhaps inevitable in a period of transition like the present. The clear and well-timed report of the Education Committee will enable the respective examining boards, with or without pressure from the General Medical Council, to bring their regulations into more explicit form, and to ensure the high standard of efficiency which the Council prescribes.

The laboratory work required should comprise the study of air, water, food, clothing, soil, sewage ; meteorology, bacteriology, disinfection, parasites, and certain branches of human and comparative pathology. The Committee suggested that use might be made of the resources of the veterinary school, and that candidates should be required to produce evidence of having received practical instruction in diseases of animals in relation to public health. The Council adapted the recommendation of the Committee in a slightly modified form (see page 1230).

The course of laboratory instruction must cover a period of six months after the candidate has obtained a registrable qualification, in a laboratory or laboratories approved by the examining body. Several efficient laboratories are now being organized, and it is important that the other authorities should clearly define in detail, as the Conjoint Examining Board in London have already done, the points upon which practical instruction is required.

The Committee offer no suggestions with reference to the six months' course of practical out-door sanitary work with the medical officer of health for a county or large urban district, which is to be required in the new order of things. Facilities for this purpose have already been given in Newcastle and elsewhere, but it would be interesing to know how far the new system of pupilage has been

acccepted by medical officers of health generally, and by their sanitary authorities.

Both courses of practical work must be taken in a post-graduate year, and at least twelve months must elapse after obtaining the first registrable qualification before a candidate is admitted to the examination for a diploma in public health, the object being "to secure the attention of candidates to the higher special studies, undistracted by the ordinary work of the medical curriculum."

The Medical Council has taken strong action to ensure that the next generation of medical officers of health shall be scientific men, well trained in the theory and practice of this special branch of medicine. Let us hope that the sanitary authorities of the future will also advance with the age, and that a true national public health service, worthy of the country, may at last be formed, with a Minister of Health at its head.—*Brit. Med. Jour.*

MEDICAL CHEMISTRY.

DEODORIZING NAPHTHALIN.

To deodorize naphthalin, simple mixture with benzoic acid or tincture of benzoin does not suffice. Its admixture with camphor and other deodorants has been found to be of but temporary effect. But if it be mixed with benzoin and then sublimed, it loses its tarry odor and acquires a pleasant smell, which it retains.—*Drug. Bulletin.*

NOTE ON *P*-PHENETIDIN AND PHENACETIN.

An interesting communication on *p*-phenetidin and a new test for purity of phenacetin appeared in a recent issue of the *Pharmaceutisch Zeitung*, having Ludwig Reuter for its author, of which the following is a short resume:

Physiological experiments made on rabbits and guinea-pigs revealed the fact that *p*-phenetidin is a poison, continued small doses including nephritis accompanied by albuminuria, larger doses (10 drops hypodermically(causing instantaneous collapse. One drop a day given internally sufficed to superinduce severe nephritic troubles within a few days.

When *p*-phenetidin is dropped into fused chloral hydrate, a strong color reaction ensues instantly, which increases in intensity on the further addition of the former, and on shaking, a strong reaction is seen to take place between the two chemicals. Pouring this mixture into a large volume of cold water, the latter assumes an intense purplish-blue color, while at the same time a dark pasty mass is separated. This body is almost insoluble in water, but more so in the presence of chloral hydrate. A little, however, remains to color the liquid, since 1 drop *p*-phenetidin treated with chloral hydrate is enough to distinctly tinge 2 liters of water, and the chromogen produced from 1 gram of *p*-phenetidin gives a distinct color to 40,000 parts. The new dye may be extracted from its chloral-free aqueous solution with chloroform or ether. Allowing this latter solution to evaporate, spontaneously, well defined hard crystals are formed, dark red and transparent.

Phenacetin (=acet-p-phenetidin) is produced by boiling together *p*-phenetidin and glacial acetic acid, and it will happen that acetylization is not always perfect, so that traces of *p*-phenetidin will pass over. The last traces of this impurity are exceedingly difficult to remove. In view of this fact, and in further consideration of the physiological action of *p*-phenetidin, as reported above, the presumption is warranted that this latter impurity may have been the cause of the many untoward effects following the administration of phenacetin, especially coma and cyanosis.

It therefore becomes the duty of pharmacists to look well to the quality of their phenacetin dispensed, and for this purpose chloral hydrate becomes an excelleut agent, Reuter stating that the smallest traces may be detected. He describes the reaction as follows: Liquify 2.5 grains of choral hydrate, by means of a water bath, in a small test tube, then add 0.5 gram of phenacetin and assist solution by shaking. If the mixture was not exposed to the water bath heat longer than two-third minutes,, the solution will be clear and *colorless* in the total absence of *p*-phenetidin from the phenacetin. If, however, only traces of the impurity are present, the solution *immediately* turns more or less deeply, purplish-red or bluish-purple, according to the degree of impurity.

However, it must be noted that absolutely pure phenacetin, remaining unchanged by heating during five minutes with chloral, will yield a pink coloration when the heat is prolonged to 15–30 minutes. This latter reaction, it will be seen, therefore constitutes a good test of identity for phenacetin.

The same author also mentions an iodine re-action, without, however, crediting the same with any importance. The same test

for for *p*-phenetidin, it seems, has also been employed for some time, but with better success, by Felix Goldmann, who, in a later issue of the Pharmaceutische Zeitung, makes public the details of his method. Goldmann proceeds as follows:

Dissolve with the aid of heat, 0.5 gram phenacetin in 2 ccm. of alcohol, and add 5 ccm., of a solution containing 1.0 gram of iodized potassium iodide solution (potassium iodide, 7.0; iodine, 5.0; water, 100.0) in 20 liters of water. Re-dissolve the phenacetin, which crystallizes out, by continued boiling. If pure no color re-action appears; in the presence of traces of *p*-phenetidin, however, a rose pink color develops.

Goldmann also substantiates the observations of Reuter with regard to the physiological effects of *p*-phenetidin. Administered to dogs, in the proportion or 0.1 gram per kilo of their weight, it produced marked lassitude, vomiting, acceleration of pulse, and cyanotic discoloration of mucus membranes. In addition, the kidneys were found to be irritated, the urine became strongly albuminous,and contained large amounts of *p*-phenetidin and *p*-amidophenol. However, the last two decomposition products are also present in small quantities in urine after the ingestion of phenacetin, free from *p*-phenetidin.—*West. Druggist.*

TEST FOR MERCURIC CHLORIDE.

Mr. Borntraeger recently discusses the best methods of detecting traces of mercuric chloride (in *Pharm. Centralhalle.*)

He points out that any aqueous, oily, or soap liquid containing mercuric chloride gives immediately with zinc chloride and hydrochloric acid a black-gray color, while with sulphuretted hydrogen or ammonium sulphide it immediately becomes blackened.

When shaken with a mixture of potassium iodide, acetic acid, and ether, and allowed to stand, three layers are formed, the middle one constituting a green zone of the mercurous salt.

The separation is said to be so sharp that when carried out in a narrow test tube it gives approximately quantitative results. —*Pharm Jour.*

TOXICITY OF CRYSTALLIZED ACONITINE.

The great toxicity of crystallized aconitine has recently been again illustrated in Belgium. A lady, according to the *Journal de Pharmacie d'Antwerp,* was ordered to take some pills containing $\frac{1}{4}$ of a milligram ($\frac{1}{1000}$ grain) of this alkaloid, to be repeated five times a day, but after the third dose she was seized with great nausea. A male relative scouted the idea that the pills were to blame and swallowed two of them at once, representing $\frac{1}{125}$ part of one grain of crystallized aconitine. He died amid convulsions within one hour. In commenting on this case M. Ferraud, in the *Bulletin Commercial,* calls attention to the fact that three years ago it was demonstrated to the Paris Pharmaceutical Society that $\frac{1}{4}$ of a milligram given to a grown person had nearly proven fatal. The foregoing only adds strength to the conviction that all of the so-called aconitines should be left severely alone for internal medication.—*Western Druggist.*

SALICYL-SULHPONIC ACID A NEW ALBUMIN TEST.

Salicyl-Sulphonic acid ($C_6H_3.OH.SOH_3O.COOH$), or sulphosalicylic acid, has been found by J. A. Mac William (*Brit. Med. Jour.*) a very delicate reagent for albumin and all other proteids in solution. Following is the method employed: Take a small amount of urine (for example, 20 minims), preferably in a very small test-tube, and add a drop or two of a saturated watery solution of the reagent. If the urine is strongly alkaline, an extra drop or two of the acid should be added, and if no opalescence or precipitate occurs it is well to test the reaction with litmus-paper, and make sure that the urine has been rendered strongly acid. On adding the reagent, shake the tube quickly so as to mix its contents. Then examine at once. The occurrence of an opalescence or cloudiness immediately or within a very few seconds (for example, two to three seconds) is a test for proteids intermediate in delicacy between the cold nitric acid test on the one hand and the acetic acid and heat test (under favorable circumstances) on the other. The development of an opalescence some time after (for example, one-half to two minutes) is a more delicate test than even acetic acid and heat, and shows the presence of minute traces of proteid, which are probably insignificant, from a clinical point of view, as a rule. Next heat the tube to the boiling-point. If the precipitate or opalescence is caused by the ordinary "albumen "(albumen and globulin) commonly present in albuminous urine it does not disappear on heating, but, on the other hand, becomes markedly flocculent. But if the precipitate or opalescence is due to the presence of albumoses or pep-

tones, it clears up on heating (before the boiling-point is reached) and reappears when the tube cools.—*Western Druggist.*

NEWS AND MISCELLANY.

DR. G. FRANK LYDSTON.

Dr. G. Frank Lydston has been elected to the chair of Genito-urinary and Venereal Diseases, in the Chicago College of Physicians and Surgeons.

CHOLERA IN ASIA MINOR.

Reports as to the spread of cholera in Asia Minor have compelled the Porte to active precautionary measures for the watching of ships arriving from the Syrian ports.

DR. J. P. CROZIER GRIFFITH.

Dr. J. P. Crozier Griffith, Professor of Clinical Medicine in the Philadelphia Polyclinic, has also been elected Clinical Professor of the Diseases of Children in the University of Pennsylvania.

THE HISTORY OF TUBERCULIN.

In four acts:

Act 1—Eureka.
Act 2—Vici.
Act 3—Ave, morituri te salutant.
Act 4—De mortuis nil nisi bonum.
Epitaph—Fuit.
—*Medical Press.*

GLYCERIN SUPPOSITORIES.

Polubruiski (*Deutsche Med. Zeit.*) advises that glycerin suppositories are useful under the following conditions: 1. Constipation due to hardened fæces in the rectum. 2. Intestinal impaction in large intestines. 3. Pressure on the rectum from tumors. 4. To prevent straining at stool. 5. In children. 6. To hasten and increase ordinary evacuations.—*Western Druggist.*

THE ANTI-TOBACCO MOVEMENT IN FRANCE.

The French Society against the Abuse of Tobacco offers a prize of 300 francs (£12) for the best report of at least six unpublished observations of affections exclusively attributable to the abuse of tobacco. Full details must be given as to the etiology, symptoms, progress, and termination of the cases. Further particulars may be obtained from the President of the Society, 38, Rue Jacob, Paris.

DR. H. M. WHELPLEY.

Dr. H. M. Whelpley has been elected Professor of Physiology and Histology and Director of the Histological Laboratory of the Missouri Medical College. He has also accepted the office of Secretary of the faculty. The doctor is Professor of Microscopy in the St. Louis College of Pharmacy and Secretary of the Section on Materia Medica and Pharmacy of the American Medical Association.

FEMALE MEDICAL PRACTITIONERS IN JAPAN.

Since 1884, 36 women have passed the primary and 8 the final examination for the license to practice medicine. The examinations have in all cases been held at Tokyo, and the gradual progress of the movement is shown by the fact that while in 1884, only 1 woman passed the primary examination, the number of the successful candidates in 1889 was 15. In 1890, however, the number fell to 7. The number of those obtaining the license to practice has never exceeded 2 in any one year.

HEADACHES OF CHILDREN.

The headaches of school children, says Dr. W. S. Higgins in the *Peoria Medical Monthly*, are caused, not by over-study, but strain on the eyes caused by the white book paper used. Smoked eye-glasses will prevent the trouble, but children naturally dislike to wear glasses, and he now earnestly advises printing school books on yellow paper in blue ink, experiments having proven this the very best combination. For similar reasons white letters on black ground have also been recommended.

THE MODERN DIFFERENCE.

The doctors of the long ago,
With minds upon their patients' pain,
With ready lance were never slow
To bleed 'em in a vein.

The doctors of the present day,
Who count upon their patients "payin,"
Oft find their efforts—so they say—
To bleed 'em are in vain.

REMOVAL OF MOTHER-MARKS.

The *Allgemeine Medicinal Central-Zeitung* gives the following as very efficacious: Mix one part of tartrate of antimony with four parts of *emplastrum saponatum* and work into paste. Apply the mixture over the mark to be removed to the depth of one line (one-twelfth inch,) and cover with a strip of gummed paper or court plaster. On the fourth or fifth day suppuration sets in, and a few days later scarcely a sign of the mark can be seen.—*Dixie Doctor.*

AMERICAN ELECTRO-THERAPEUTIC ASSOCIATION.

The American Electro-Therapeutic Association will hold its first annual meeting at the Hall of the College of Physicians, corner Locust and Thirteenth Sts., Philadelphia, Pa., Thursday, Friday and Saturday, September 24th, 25th, and 26th, 1891, under the Presidency of Dr. G. Betton Massey.

Physicians interested in the discussion of electricity in medicine, are invited to attend without further notice.

HORATIO R. BIGELOW, M. D.
Chairman Executive Council.
WM. H. WALLING, M. D.,
Secretary.
2005 Arch Street, Philadelphia.

MEDICAL TEMPERANCE ON THE CONTINENT.

In the struggle to check inebriety, which has of late so occupied the most cultured intellects on the Continent of Europe, very little has been done in the advocacy of abstinence. The prevailing idea, even among Continental members of the medical profession, has been that the increase of insanity and of other evils from drinking has arisen from the heavier alcohols, and that pure unsophisticated spirits, wines, and beers are really temperance beverages. A new departure has, however, been taken by a few of our Continental *confrères.* Professor Forel of Zurich, Professor Bunge of Basle, and Dr. Wilhelm Bode of Dresden, have established strictly abstinence societies in those cities, and these associations are now vigorously at work.—*British Med. Journal.*

"A COLD IN THE HEAD."

"A cold in the head;
What need be said?
Uglier, stupider, more ill bred;
Almost any other disease
May be romantic if you please,
But who can scoff
At a very bad cough?
If you have a fever you are laid on the shelf
To be sure—but then you pity yourself,
And your friends' anxiety highly excited,
But who do you suppose
Ever pitied a man for blowing his nose?
Yet what minor trial could be worse?
Unless it be reading this blundering verse,
Never fit to be written nor read,
No, nor said,
Except by a man with a cold in his head."
—*Exchange.*

REPORT ON HYPNOTISM.

The Committee of the British Medical Association, appointed to investigate the subject of hypnotism state that they regret that the time at their disposal has been too limited to allow of their completing their researches into a subject of such width and complexity. They are, therefore, as yet unable to express any definite conclusions to the Council. So far as their investigations have gone they seem to prove that the phenomena of hypnotism are such as to favor the belief that it may prove of service as a therapeutic agent when employed legitimately by properly qualified scientific persons.

They have no doubt, and they desire to give emphatic expression to this conviction, that the use of hypnotism by persons who are not so qualified, or without due precautionary restrictions, is greatly to be deprecated, and might properly be limited by legal enactment.

The Committee suggest their re-appointment.—*Brit. Med. Jour.*

MEDICINE AND PHYSICIANS IN RUSSIA.

M. Perfilieff, well known in Russia by his studies in public and social hygiene, and by his publications upon the desiderata of medical teaching and sanitary organization in Russia, speaks this time of medicine and physicians. He observes that the natural sciences are too sparingly and badly taught in Russian gymnasiums, and that, during their stay at the Faculty, the medical students are content with studying the theory of medicine without acquiring enough practical knowledge. The author complains that young physicians confine themselves to specialities as soon as they obtain their diplomas, so that there are no (or but very few) physicians qualified in natural philosophy.

The country has no need of female physicians; but these may usefully practice

medicine within restricted limits, well defined, or among the Mahommedan tribes in the empire, whose religion and customs are opposed to the practice of the medical art by men.

The sanitary organization of the empire and the sanitary conditions of life with most of the inhabitants leave much to desire. Mortality is much higher in Russia than in other countries. Of 1,400,000 male children born in 1855, within twenty-one years (in 1876—time of the conscription) 610,000, or 43 per 100 only, were found living. Among 1,512,202 boys born in 1862, in 1882 (time of the conscription) 777,769, or 51 per 100, were found living. Among 382,109 called in 1884, 71,607 men, or 19 per 100, were found, after medical examination, incapable for military service. The military incapacity is in most cases determined (in 32.9 per 100 cases) by affection of the bones, articulations and muscles.

These sad percentages need no commentaries and show that if France is threatened with depopulation on account of its feeble natality. Russia whose natality is considerable, is threatened especially by the physical degeneration of its inhabitants, a degeneration which was ascertained repeatedly on all sides through the latest statistical inquiries of Russian hygienists.—*Cin. Med. News.*

AMERICAN PUBLIC HEALTH ASSOCIATION.

The Nineteenth Annual Meeting of the American Public Health Association will be held at Kansas City, Missouri, Kansas, October 20, 21, 22, 23, 1891.

The Executive Committee have selected the following topics for consideration at said meeting:

1. Sanitary Construction in House Architecture.

(a) Heating; (b) Lighting; (c) Drainage; (d) Ventilation.

2. Railroad Sanitation.

3. Meat Supplies.

4. Milk Supplies of Cities.

5. Arsenical Papers and Fabrics.

6. Isolation Hospitals for Infectious Diseases in Cities.

7. Papers upon any of the subjects upon which special committees have been appointed.

8. Papers on Miscellaneous Sanitary and Hygienic Subjects.

All papers will be received by the Executive Committee subject to the requirements of the by-laws. Preference will be given, however, to papers upon the subjects selected by the Committee in making up the daily programme of the meeting.

All persons who propose to present papers at the next meeting of the Association, will be governed by the following by-laws of the Executive Committee:

"4. All papers presented to the Association must be either printed, type-written, or in plain handwriting, and be in the hands of the Secretary at least twenty days prior to the annual meeting, to insure their critical examination as to their fulfilling the requirements of the Association.

"5. If any paper is too late for critical examination, said paper may be so far passed upon by the Executive Committee as to allow its reading, but such paper shall be subject to publication or non-publication as the Executive Committee deem expedient.

"6. All papers accepted by the Association, whether read in full, by abstract, by title, or filed, shall be delivered to the Secretary as soon as thus disposed of, as the exclusive property of the Association. Any paper presented to this Association and accepted by it shall be refused publication in the transactions of the Association if it be published in whole or in part by permission or assent of its author in any manner prior to the publication of the volume of transactions, unless written consent is obtained from the Publication Committee.

"7. Day papers shall be limited to twenty minutes, and evening papers to thirty minutes, each."

Invitations extended to individuals to prepare papers, for the Association do not imply their acceptance by the committee, merit alone determining that question.

All communications relating to local matters should be addressed to E. R. Lewis, M. D., Chairman Local Committee of Arrangements, Kansas City, Mo.

Another circular will be issued before the meeting, giving transportation rates, hotel rates, etc.

Blank applications for membership can be obtained by addressing the Secretary, or Chairman of the Local Committee of Arrangements.

Officers: President, Frederick Montizambert, M. D., Edin.; F. R. C. S.; D. C. L.; Medical Superintendent Canadian Quarantine Service, Quebec; First Vice-Presi- Dr. Thomas F. Wood, Wilmington, N. C.; Second Vice-President, Dr. Henry B. Horlbeck, Charlestown, S. C.; Secretary, Dr. Irving A. Watson, Concord, N. H.; Treasurer, Dr. J. Berrien Lindsley, Nashville, Tenn.

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Clinical Lecture.

DYSMENORRHŒA—MISCARRIAGE AND ITS SEQUELÆ—FIBROIDS OF THE UTERUS.

BY W. GILL WYLIE, M. D.,

PROFESSOR OF GYNÆCOLOGY AT THE NEW YORK POLYCLINIC—VISITING GYNÆCOLOGIST TO BELLEVUE HOSPITAL, ETC.

DYSMENORRHŒA.

Gentlemen.—The first patient I show you to-day, is a married woman thirty-five years of age, who has been married five years but has never become pregnant. She commenced to menstruate for the first time when twenty-two years of age and she has now been sick for several years. She complains of pain in the lumbar region, which is considerably increased during the process of menstruation, has frequent micturition, and complains of a lump in the epigastric region which sometimes rises up in the throat. Her urine is of normal consistency.

When a woman comes to your office with such a history as she gives, and one who has never been pregnant, the chances are that, in the large majority of instances you will find on digital examination, per vaginum, a small uterus, anteflexed either forward on the bladder, or backward on the pelvis. It seems to me that there is a great deal of nonsensical talk on the part of gynæcologists about the degree of anteflexion in any given case, for if the uterus is small, it is a little matter whether it be flexed forward to a great or small degree. In retroversion it does, however, make a good deal of difference, but in the case of anteflexion, it means simply that the uterus is weak and unable to sustain itself in its normal position in the pelvic cavity.

As I now proceed to examine this woman's uterus through the vagina, I find as I have already told you in anticipation, an anteflexion of quite a typical character, though the uterus is somewhat larger than is generally found in most cases of this kind. As the uterus is movable I cannot make out any disease of the tubes and ovaries, although the signs I find present in this case, point somewhat in that direction. I can distinctly feel the whole sigmoid flexure, and know that this woman's backache is due to the bearing down sensation which arises, not from the displacement of the uterus, but from displacement of the abdominal and pelvic contents which impart to the patient the sensation of uterine displacement. It is for this reason that the backache, which is a very common symptom in uterine trouble, is not always relieved when the uterus is restored to its normal anatomical position. We know from clinical experience how frequently the rectum is involved in these cases of uterine trouble, how common a symptom constipation is, how exceedingly common are fissures of the rectum and hæmorrhoids, and how hyperæsthetic is the condition of the rectum. We frequently find that this hyperæsthetic condition of the rectum is due to some ulcerative process in the intestine, and the tissues of the part are so extremely sensitive that the slightest amount of blood pressure, when the patient is in the erect posture, will commonly give rise to all the symptoms of uterine displacement. Then, let me impress upon you this one important fact that backache, when associated with uterine trouble, is often not due to the abnormal condition of the uterus, but derives its origin from some other source.

There is another pathological condition often overlooked by the physician, and which I wish to direct your attention to in this connection. In a great many cases of so-called uterine disease I find by digital examination of the uterus that there is very little, if any trouble, present in that organ. Perhaps it may be nothing more than a slight displacement, and you will find when you correct the displacement you will not cure your patient. The reason of that is that a great many

women, who lead sedentary habits of life, are of a gouty and rheumatic temperament, and many of these cases of obstinate and persistent backache are of gouty and rheumatic origin. So, acting on this hypothesis, when a woman comes to my office complaining of backache, I nearly always give her twenty grains of salicylate of soda, three times a day for three days, and then ten grains for the same space of time, three times a day, and then five grains three times a day, following this course of treatment with bicarbonate of soda. By adopting this plan in these cases of backache, you will be greatly surprised at the number of patients that you will be able to cure of their trouble.

Now, to return to the case before us. We have seen that this woman has flexion of the uterus, and have diagnosticated that by digital examination. We will now proceed to determine if she has dysmenorrhœa, a pathological condition some gynæcologists positively assert is usually found associated with flexion. I, however, hold that flexion has no sort of relationship whatever with dysmenorrhœa, and that the latter is nearly always due to one cause, and that cause is an abnormal condition of the lining membrane of the uterus, at or about the os internum.

The best proof of this lies in the fact that when you wash out the vagina with a bichloride solution, and having dipped the sound in an antiseptic solution, shaping it in the form of the uterine canal, and pass it into the cervix, it will pass about three-quarters of an inch without giving rise to any pain or feeling of discomfort on the part of the patient; but as soon as you touch the os internum with the sound, she will begin to cry out with pain. This sense of pain is pathognomonic of the existence of dysmenorrhœa in that woman's uterus, for if there be no dysmenorrhœa, there will be no pain when the sound is brought in contact with the lining membrane at the os internum. If you will bring twenty women with dysmenorrhœa to me I will demonstrate this pathological fact to your entire satisfaction in every instance.

When a woman comes to my office with those characteristic signs of dysmenorrhœa, and I find that the uterus is movable, having excluded a diseased condition of the tubes and ovaries, my treatment consists in dilatation, that is in introducing the blades of the dilator into the cervical canal, separating them three or four points and then withdrawing them. I next make an application of pure carbolic acid through a cylinder tube to the diseased portion of the uterine membrane. In that way I secure perfect drainage and bring about a physiological change in the diseased lining membrane of the uterus. If you want to be a little careful in your procedure, you may apply against the cervix a little iodiform by means of a powder blower, as the speculum is withdrawn. The first dilatation should be made at the home of the patient and she should be kept in bed until all the mental and physical disturbance incident to the operation has completely subsided. I would advise you not to make more than two intra-uterine applications in any one case, and if you make the application at a period of time near the menstrual discharge you may cause trouble, and arrest the function of menstruation. By this simple procedure you can cure the dysmenorrhœa in nearly all cases that apply for treatment suffering from this pathological condition.

There are some of these patients whose uteri are markedly indurated, the uterine tissues exceedingly sensitive, and the patients extremely nervous. Under these circumstances, it may be necessary to give ether, and I would then advise you to use the curette in addition to the application of carbolic acid to the endometrium. In the use of the curette, have a good steel instrument and put in a hard rubber drainage tube 2¼ inches in length, and about the size of an ordinary lead pencil, slightly bulbous at the point, and curved so as to approximate the normal physiological curve of the uterine canal. At its proximal end, it should have a button shaft so as to rest in the cul de sac, with a deep slot running from one end to the other; this slot is to act as a medium for drainage. The slot should equal in calibre, at least one-third of that of the tube itself. This tube should be permitted to remain in position in the canal for a week, a roll of iodoform gauze being introduced into the vagina to maintain the tube in its proper position. Then put the patient in bed, and have her remain there for a period of one week. On the third day you can remove the iodoform gauze, wash out the vagina with a bichloride solution, replace the gauze, keeping it in for three or four more days, and at a later period you may use a warm douche or two. Then take out the drainage tube and have the patient use boroglyceride after the next menstruation. Two or three days after she has ceased menstruating, examine her in Sims' position, wash out the vagina, take a clean sound and pass it into the uterus. If you can pass it freely into the uterine cavity without causing pain

or hæmorrhage, the dysmenorrhœa of your patient will be cured.

By these measures, I claim you cure nine out of ten cases of dysmenorrhœa that may present themselves to you for treatment, within from eight to ten weeks. Where, however, the general condition of the patient is very bad, or becomes bad in the spring, in some cases only a temporary cure will be brought about, and the next spring when the general condition of the patient has deteriorated, uterine catarrh will again return, and with it the dysmenorrhœa.

These produces viz., curetting, divulsion and drainage, may appear to you to be a very simple measure, but in the vast majority of the cases operated upon in this manner by you, you will fail to secure a good result unless you are particularly expert in the use of the instruments you employ. Up to eight years ago in this city, most of the cases treated in this way where the uterus presented an indurated appearance, failed to bring about a good result, because the operation did not succeed in dilating the os internum. In dilating the os internum, the tendency is for the instrument to slip off. When an operator takes a tenaculum and holds the uterus well down while dilating the os, you can be assured that man does not understand the very first principles of dilatation of the uterine canal, and will not consequently succeed in bringing about the desired result. The cervix will simply become elongated, and the tube rests in the cervical canal, instead of going into the uterine cavity. Fifteen years ago, I took the trouble to go around and see the most eminent men in this country perform this operation. And I have seen Marion Sims himself fail two out of three times to get the tube into the cavity of the uterus. I drew his attention to this elongation of the cervix, I have just spoken of, and in a case where he failed I took the curved dilators myself and got them well through. I dilated the os internum and succeeded in introducing a sound an inch farther in than he could. When I put his glass plug through the os internum, it was held there so firmly that it could not, without some difficulty, be drawn out.

Not long ago, at a meeting of the Obstetrical Society of this city, I heard a very eminent gynæcologist get up in the meeting and make the statement that he never cured a single case of dysmenorrhœa or sterility by dilatation or divulsion. I replied that he did not cure them, because he did not know how to perform the operation properly and efficiently, and the man who knows how to do this operation thoroughly, will succeed in securing the desired result in nine cases out of ten.

MISCARRIAGE AND ITS SEQUELÆ.

The next patient I present to you is a married woman, 23 years of age. She has been married three and a half years, and has had but one child born, a year after her marriage. She has had four miscarriages and did not menstruate previous to her marriage.

We learn from the history of this woman that she gave birth to her child one year after marriage, and had her first miscarriage nine months later. She had her second miscarriage, four months after her first, the third, six months after the second and the fourth, about five months after the third. She had pain in the left ovarian region, and pain in the back, which continued up to a few months ago, when a laparotomy was performed and an ovarian cyst removed from the left side of the abdomen.

Among the better classes in New York, the form of uterine disease that generally prevents itself to the gynæcologist, is the arrest of development of that organ, while, among the poorer classes, and especially in the case of patients who present at clinics like this, the chief trouble seems to be due to miscarriage and its sequences. These generally take the form of chronic endometritis, subinvolution, laceration, displacements and sterility. A great many of these sequelæ have their origin in want of cleanliness after labor or miscarriage, an ignorant and unclean mid-wife being the obstetrician employed in very many instances. This patient represents a typical instance of this.

As I examine this woman's uterus I find that it occupies its normal position in the pelvic cavity, though it is, perhaps, a little larger than normal. I can detect no signs of a tumor on either side, except that I feel on the left side a mass which appears like a prolapsed intestine.

I wish, in this connection, to say a word on miscarriage. As to the cause of this condition, of course, it may have its origin in a number of sources. Excluding mechanical causes, such as induced criminal abortion, syphilis is one of the most frequent. A woman who has been infected with syphilis, is liable to have a miscarriage any time after the second month, though it is generally more apt to go on to the fourth, fifth, or sixth month.

As to the local conditions that cause mis-

carriage, displacement backward plays a very important part. If you have a retroflexion of the uterus, the fundus may be caught in the hollow of the sacrum, and as the uterus grows larger, the fundus doubles under the sacrum, as a result of this pathological process, the fœtus is squeezed out of the uterine cavity.

Another cause of miscarriage is laceration of the cervix, with eversion of the os. You may get, as a result of this condition, an active catarrhal disease of the cervical canal starting from a latent process, as the uterus becomes congested, and as pregnancy continues, this cervicitis becomes so active as to extend into the uterine cavity and give rise to an abortion. These cases are frequently found associated with membranous dysmenorrhœa. These are the most frequent causes of spontaneous abortion in women.

Where women have had six or seven abortions, it is very rarely you can cause the pregnancy to go on to full term by simply curing the uterine cervical trouble. There are many cases of spontaneous abortion, where if you relieve the congestion by means of boroglyceride applications during the first three or four months of pregnancy, the patient may go on to full term. In the case of retroversion, when the woman becomes pregnant, by putting in a pessary so as to prevent the uterus from being kept in the hollow of the sacrum, that organ will go on enlarging, and after the fourth month is past there will then be no risk of an abortion taking place.

I always make it a habit in practice to examine a woman the second week after her confinement to determine whether there be any abnormal condition present in the uterus or not. If the lochial discharge continues up to that time I place the woman in Sims' position, push the uterus up if it be necessary, and use boroglyceride cotton pledgets. By these measures, you will be certain to secure the establishment of involution and get a firm contraction of the uterine ligaments. I make it a rule now to take no case of confinement unless I have the privilege of superintending the condition of the patient for at least six weeks after delivery. If the perineum be ruptured, I always sew it up, and you will in vain search for any pathological condition following a woman after labor or miscarriage in any case that I have treated.

The doctor asks me whether there be any danger in the use of boroglyceride pledgets in the treatment of uterine disease. I would say, in answer to that question that there is absolutely no danger whatever, and instead of it having a tendency to abortion, it, on the contrary, usually prevents it, if there be such a condition threatened. I generally use boroglyceride in case of threatened abortion, and generally with very good result. The physiological action of this drug is to produce a free watery discharge from the vagina. In the case of nausea in women, I use boroglyceride till the os is soft, and it is surprising to see the beneficial effect produced by this simple measure. If the nausea is not relieved by this means, I dilate the cervix below the os internum, and by this measure, I will guarantee to cure any case of nausea and vomiting, if the period be not too near menstruation ; I use boroglyceride tampons twice a week to soften the os, then I take the dilators, introduce them three-quarters of an inch up the cervical canal, and dilate freely. When you have dilated the os sufficiently so as to be able to introduce your index finger, you will be able to cure any case of nausea and vomiting that may present itself to you for treatment.

There is another point, in this connection, I wish to impress upon your minds, and that is, when you first begin to treat these cases, in this way, you will be sure to fail in curing your patient. My views about the ætiology of nausea and vomiting in women are that these pathological conditions are due to either a diseased or indurated condition of the cervix. When the tissues are normal and the cervix swells and becomes large, there is then no pressure on the nerves of that region, but when the cervix is the seat of a pathological process, the diseased follicles and glands that are located there, become enlarged, and when the time arrives for a physiological enlargement of the cervix it does not grow large, but causes pressure and gives rise to reflex symptoms. I have been frequently called in consultation to see cases that were utterly hopeless and where an abortion had been advised by the attending physician, as the only means of relief, but where I dilated the os, and brought about a complete cure of the symptoms.

FIBROIDS OF THE UTERUS.

The next patient is a married woman 48 years of age, who has been married 26 years. She has had nine children and one miscarriage, the last child being born six years ago. She had two uterine polypi removed 6 months since, and had some discarge from the vagina three days ago, she having ceased menstruation for some years.

It is always a cause for some suspicion of

pathological process going on in the uterus of a woman who had ceased menstruating, as this woman has and then for the flow to go on again. As I examine the uterus of this woman I find it somewhat enlarged, and as I pass my finger along the vagina, it comes in contact with a small fibroid of the uterus. In a case like this, the hæmorrhage this woman complains of ought to be controlled by the use of the curette and removing any small fibroids that may be found in the uterine cavity. If curetting does not succeed and the hæmorrhage still persists, the proper course to pursue then would be to remove both tubes and ovaries, and put an end in that way to any further trouble.

This question of fibroids brings up the subject of electricity in the treatment of these morbid growths. My belief is simply this, that if you employ electricity in sufficient quantity and with sufficient force to act as a destructive agent, you can stop the hæmorrhage and destroy these growths, but in doing so, except in rare instances, you run greater risk than if you were to resort to operative interference for their removal. If electricity stops hæmorrhage, it does so by practically destroying the mucous lining of the uterus. If it diminishes the size of a fibroid, it acts as a destructive agent by interfering with its growth and vitality. Who has ever heard of a tumor on the hand or other external portion of the body cured by electricity unless it was sufficiently powerful to destroy the skin or adjacent tissues. Fibroids cured by electricity in young women grow more rapidly after you have stopped the electricity than before its use. My experience in the use of electricity in these cases of fibroids has been, that it has seemed beneficial in women who are near the menopause, and it is doubtful whether this beneficial effect was due to the electricity or to the menopause.

In a case like this woman, I would prefer the use of the curette to that of electricity; for I know by practical experience that I can stop the hemorrhage, with much less risk, and certainly less trouble in the future, than if I were to employ electricity to produce the same effect. My main objection to the use of electricity in these cases is, that the uterine cavity is lined with follicles and glands, and by the use of electricity or any other caustic agent, you shut up the mouths of these glands, and follicles, deprive them of drainage, and in this way give rise to the establishment of tumors. As a result of this condition of affairs, you produce in the woman reflex symptoms of a much more distressing nature than the original trouble for the elimination of which you employed the use of electricity.

COMMUNICATIONS.

SHORT CONSIDERATIONS ON INTUBATION IN CHILDREN AND ADULTS, AS ADOPTED IN ITALY.

BY PROFESSOR F. MASSEI, M. D.,

NAPLES, ITALY.

Although intubation owes its birth to America, and is a subject that is well known and frequently illustrated in that country, I think that its interest will, in no way, be diminished by a slight contribution of my own personal experience, which embodies the results that have been secured in Italy by this new method. In presenting this contribution to the profession in America on the subject of intubation of the larynx, it will, I believe, represent the best homage I can offer to the genius and ability of its distinguished inventor, Dr. O'Dwyer.

The value of intubation in croup ought to be better appreciated by specialists in diseases of children than it has been, but it has happened, on the contrary, that the first who have given this new method a trial have been the laryngologists.

Great difficulty was experienced in the practical introduction of intubation into Italy, and I myself was most firmly opposed to it on purely theoretical grounds, being of the opinion that intubation, although by no means a bloody operation, was not always free from danger. My own researches and experiments have been, I am glad to say, mainly instrumental in dissipating these groundless fears and establishing on a sound basis the credit of intubation in Italy. I now rank myself among its warmest and most steadfast advocates.

It is worthy of mention that the unjust comparison that has been instituted between intubation and tracheotomy in croup, did not fairly reflect the virtues of the former. Our sincere gratitude is due to Dr. F. Egidi, of Rome, who, despite my strenuous opposition, was the first to introduce intubation into Italy. Unhappily, in Rome the malignant character of croup has given very bad results.

Dr. Egidi, a specialist of long and active practice, is a most determined and avowed

partisan of intubation. He has shown by clinical experience that the best results were not secured by tracheotomy in croup. He performed intubation and tracheotomy, and death resulted in 90 per cent. of the cases, with the general symptoms of poisoning, even in cases of primary croup favorable to a good result. In Naples I was afforded a good opportunity for experiment. In eleven intubations in children, nine of them being for croup, I have had five successes, and these occurred in so striking a manner that the profession began to look favorably upon intubation, appreciating its great value in this disease.

I will cite a few, brief clinical cases, as they have occurred in my practice.

NATURE OF THE DISEASE FOR WHICH INTUBATION WAS PERFORMED.

In my first eleven cases in children, intubation was performed for croup in nine instances; for stridulous laryngitis in two. In the first case, intubation proved in a striking manner the fact that when it is possible to lengthen the duration of the disease in the so-called primary croup, we may watch the development of the characteristic signs of diphtheria, such as the appearance of the diphtheritic patches in the throat, the skin, diphtheritic paralysis, albuminuria, etc.

The views which I have for a long time entertained with regard to the identity of croup and diphtheria, will, in all probability, find a confirmation in some of the bacteriological researches that have been recently made in Italy. Although not as yet published, they go to prove that the bacillus of diphtheria has been found also in membranes of the so-called typical primary croup.

The two cases of stridulous laryngitis have convinced me that the anatomic-pathological impairment is represented by an acute epiglottic laryngitis (chorditis epiglottica acuta), and that the disease may easily produce death by suffocation, if intubation or tracheotomy be not performed. These cases show also that in children we have the right to separate an acute narrowing of the larynx of non-infectious character, (laryngitis stridulous) from those diseases in which a simple catarrh is present, and the presence of a thick, mucus exudation, is the cause of the intense dyspnœa which frightens families, but disappear after simple treatment. Every catarrh of the larynx in children may easily render the glottis smaller, and when mucus is added to that, a spasm is apt to result; but in the acute epiglottic laryngitis we have present a morbid process which is very similar to croup, and time only can settle the question. Hence, we can understand why it is that in some eminent French publications, the symptomatology of stridulous laryngitis is presented in such a manner as would lead us to conclude there was an intermittent spastic danger, which is not really the case. From this we can see the importance of distinguishing in young children a severe form of simple laryngitis from a mild one, both being accompanied by stridor, the one in a constant, the other in an intermittent manner.

Acute epiglottic laryngitis not only represents a danger in itself, but also is the first stage of an inflammatory condition which may extend to the lungs. One of my intubations for this disease ended fatally on account of a double attack of pneumonia. I do not deem it proper to explain this result on the ground that pneumococci, which are found in the saliva physiologically, may descend through the tube into the lungs, first, because pneumonia had developed before the intubation had been performed, and second, because I have seen this condition present before I had performed intubation, viz., as a result of tracheotomy, or as a result of the ordinary treatment of the local applications of ice over the chest, third, because in the case of adults who have been intubated, we never meet with a pneumonia following this procedure. The pneumococci may reach the lungs in such a variety of ways that it is not essential to insert a tube in the larynx for their migration into the lungs.

The eleven intubations above referred to, were performed by me in children not more that five years of age, and not younger than eleven months. Three were twenty-three, eighteen and eleven months of age respectively; that is these three were under the age of two years, a period of life which gives us bad results in tracheotomy, and this, notwithstanding, I can record one successful case. Two other children were twenty-seven and twenty-nine months old respectively, who were suffering from croup, and in one, recovery took place, although it was a secondary croup.

THE TIME DURING WHICH THE TUBE REMAINED IN PLACE.

The tube, when recovery took place, that is, when the stenosis of the larynx had entirely disappeared, remained *in situ* for a period no longer than six days, nor shorter than thirty-two hours. During this period,

it was sometimes coughed up and sometimes taken out to be cleaned. It is worthy of mention that these extreme conditions existed in cases of stridulous laryngitis, one of which ended in death, and the other in recovery.

In two cases of croup, the tube remained *in situ* for a period of five days, in one case, only 63 hours. In two instances (croup and stredulous laryngitis) although death took place when the tube was removed, no sign of narrowing of the larynx was present.

RESULTS.

The result of my eleven intubations in children has been as follows: five recoveries, six deaths, and more particularly in nine cases of croup six recoveries; of two cases of laryngitis stridulous, one ended fatally, and one recovery took place. In the five cases that ended fatally I may mention the fact that the intubation was done by way of an experiment, as the patients were all in a very bad condition and presented no hope of recovery. Twice, the tube was coughed up, and I had not been advised of the fact until it was too late to re-introduce it. In only one instance did death occur from pneumonia, and in this instance, the breathing through the larynx was perfectly free.

The same occurred in a case of stridulous laryngitis, so that so far as the restoration of breathing was concerned intubation fulfilled every possible indication. This fact is in itself sufficient to prove that a comparison between intubation and tracheotomy in croup is not practicable. Intubation, in many instances, is sufficient to ensure free breathing through the larynx. When this is not possible, we have always sufficient time left us for the performance of tracheotomy, but in view of the superior advantages of intubation over tracheotomy (it being less dangerous and the possibility of removing the tube in a shorter time without making a wound) it becomes a duty in the treatment of croup for the physician to employ the simple procedure of intubation. Tracheotomy always remains as a last resort, particularly in cases where there is a trachal-stenosis or propulsion of a false membrane down the trachea.

We must not, however, forget that the last modifications of O'Dwyer may meet with just such inconveniences as these I have referred to and I cheerfully take this occasion to inform the profession that my colleague, Dr. Egidi, has made a very useful modification of the tubes. Taking into consideration the fact that the short, thick tubes of O'Dwyer, remained with difficulty *in situ*, that the long one had not sufficient room for the issue of false membranes, and finally, that the introduction of the tube may, in advanced stages of the disease, provoke apnœa, he employs now a tubulated introduction (in imitation of Bouchius camela) and thus the operator is not only sure to follow the right path, but the patient can freely breathe the very moment of its introduction. Egidi's tubes are shorter than those of O'Dwyer's and larger than O'Dwyer's short tubes, but they are oval in shape and remain readily in position. One set is sufficient, in all cases, and the operation is thus very much simplified.

IMMEDIATE DANGERS OF INTUBATION.

The immediate dangers of intubation, apnœa, syncope, etc., may be avoided by an early interference, eliminating by such means every inconvenience. Intubation is a simple operation, when performed as soon as the signs of a stenosis are present, and when the usual treatment has not been sufficient to avoid its employment.

The Thread.—This may be allowed to remain *in situ*, if precautions are taken that children do not snatch it away. This I prevent by enveloping the hands of the patient with a kind of pocket glove. When the thread is *in situ*, an assistant is always at hand to take out the tube, when it is occluded, and the same operator can do it in a simpler manner and shorter time than with the extractors, whose employment, as every one that has practiced intubation can testify, is difficult, and even more so when the child is dying by suffocation. The difficulty added to deglutition by the presence of the thread is not great, but we ought not to forget that the thread, although very strong, is at times broken by the teeth of the patient.

Deglutition.—As far as swallowing is concerned, I have seen in many instances that children were unable to drink satisfactorily, but in all cases, when the tube remained in place some days, they swallowed quite well. In general, I have taken care to select large tubes and to push them well down in order to prevent any obstacle to the function of the epiglottis, because I am personally convinced that this must be the real cause of the difficulty experienced by patients in swallowing. I have never permitted children to drink unless in my presence. I begin with a little coffee or tea, and afterwards give the glass, although in some instances, the first method has not proved as satisfactory as the second. In general I am able to feed my little patients with semi-solid food (pap, milk, wine,

broth, etc.,) and was never obliged to make use of the œsophageal catheter, a simple but not very practical expedient, and a very troublesome one withal. When the patient complained of thirst, I several times preferred to remove the tube, temporarily, and introduce it again; although even without the tube, some time after it remained *in situ*, deglutition was not free from difficulty.

Pneumonia—As a last consideration I may be permitted to speak a few words on pneumonia, a subject of great importance in this connection, and which not infrequently is the cause of death. I believe it has been demonstrated by post-mortem that pneumonia does not depend on the entrance of food into the inferior tract, now that the tube affords a readier access for the entrance of the pneumococci. (See s. 1.)

Pneumonia in croup, as in stridulous laryngitis, is a common complication, a consequence of, or a new localization of the disease, which in both instances may be considered to be of microbic origin, the Lœfflers' bacillus in diphtheria, the pneumococci in the latter case.

I cannot leave this interesting subject without adding a few words on intubation in adults. Since the valuable communication of Prof. Lefferts was made to the International Congress of Berlin on Intubation of the Larynx in Acute and Chronic Syphilitic Stenosis, I presented the great success of the new method, and, in fact, as soon as I was furnished with tubes for adults through the kindness of Prof. Lefferts, I began my experiments and with wonderful success. I will briefly refer to these cases. They are few in number but very instructive.

1st Case—A girl, 16 years old, very slender and pale, had a contagion on the lips when 5 years old, which was followed by the symptoms of constitutional syphilis. She applied to me for treatment, suffering from severe dyspnœa. On laryngoscopic examination the left half of the larynx was found to be infiltrated; the rima glottidis reduced to a few millimetres in diameter. Hypodermic injections of bichloride of mercury for two days resulted in no improvement, and the girl feared death from suffocation. Intubation was performed and the tube was permitted to remain for six hours in position. When taken out, her breathing was much better. The treatment was continued at intervals and the patient is now considered cured.

2nd Case—A young woman 25 years old whom I had previously on several occasions treated for severe attacks of nasal and laryngeal tertiary syphilis. She lately applied to me with symptoms of extreme laryngeal stenosis. She was in the sixth month of pregnancy and showed on laryngiscopic examination signs of gummous infiltration of the vocal cords. Intubation was readily performed and repeated for many days. The tube remained in place for from 6 to 8 hours daily. The improvement in this case also was marked. The general and local treatment was kept up, being suspended only for one or two days.

3rd Case—A man, 32 years of age, presented the symptoms of pacchy-dermi-laryngitis in the arteriod space, and in consequence, developed a marked narrowing of the larynx. By means of the curette and Schrotter's tube I avoided a tracheotomy which I was prepared to do the same day. The patient greatly improved, but in order to continue the dilatation, I used the common intubation tubes and a large one was well supported, although introduced with some difficulty and easily coughed up. This was owing to the fact that when dilatation was done, the tube was not well retained *in situ*. The effects produced after a few hours were indeed marvelous.

4th Case—A young man, 17 years of age, was suffering from chronic epiglottic laryngitis. He improved a little under the use of iodide of potassium and revulsives, but on account of an acute attack of catarrh, the stenosis increased and tracheotomy was urgently demanded. The patient lived at a 17 hours ride from Naples, and when I reached his home, I found him in a very bad condition. Intubation was easily performed and the tube was permitted to remain *in situ* for 12 hours. After this time I removed it and noticed a marked improvement of his local condition. The tube was reintroduced and then left in position for 8 days; at the end of this time, the patient was in a condition to come to Naples and follow out the local treatment under my personal supervision. He could swallow both solids and liquids from the moment of the first introduction of the tube.

In referring to these different cases, I have made no allusion to the difficulties, selection of tubes, and the time they may remain in place, as these have been very clearly and ably stated in Prof. Lefferts' original pamphlet. There is no reason to doubt that in the second case of laryngeal syphilis, as in the last one, tracheotomy was the only course to be adopted to save the patient's life. Intubation has been found to be an excellent substitute for tracheotomy with all the added

advantages of its simple and rapid mode of action, in contrast with the danger and difficulty of tracheotomy. My patients were all able to swallow solid food, and one of them even liquids, although their condition was one of great danger. After the first application of the tube, it was possible in two cases, to take it out, allow them to swallow and rest without danger of suffocation. I understand that this is not possible in all cases, and that time is the best guide to determine whether the patient can swallow well or not, as Prof. Lefferts states. I can now prophesy that intubation in adults will soon meet with larger indications, and principally in acute stenosis of the larynx, (œdema, angio-neurotic œdema of Strübing, phlegmonous laryngitis, primary erysipelas of the larynx, &c.) and even in other cases of chronic stenosis when it can be determined from laryngoscopic examination that a way, though a very narrow one, exists for the tube to take a right and firm position.

It is scarcely necessary to bear in mind that in the case of adults I have always performed intubation under the guidance of the laryngiscope, and it was possible to take out the thread and remove the tube in a simple and ready manner by means of the extractor.

I submit this brief communication as a sincere homage to Profs. O'Dwyer and Lefferts, to both of whom humanity and science are greatly indebted.

INDIGO AS AN EMMENAGOGUE. *

BY J. L. JONES, M. D.

BELLS, TENN.

Indigo was introduced to the notice of the profession as a remedial agent, and at first chiefly employed by the German physician, from whose statements our knowledge of its physiological action and therapeutical application was derived. It is odorless and tasteless, and may be given in doses of ʒss. to ℥ss. three times daily. The great difficulty in administering it is occasioned by the nausea and vomiting which the crude drug produces when given in very large doses. My attention was first directed to it as an emmenagogue in July, 1887, from an essay published in The Medical and Surgical Reporter, of Philadelphia, read by Dr. S. T. Yount, of Lafayette, Ind., before the Tippecanoe county Medical Society. He says his attention was directed to it accidentally, he being called to remove a retained placenta in a case of abortion at three months. Inquiring of the lady what she had taken to produce the abortion, he was told that she had taken indigo in teaspoonful doses three times daily for ten days; that she had taken it several times before this, always with satisfactory results. She informed him at the time, it always produced great nausea and watery discharges from the bowels. Acting on the suggestion offered by Dr. Yount's paper, I have used it in many and various cases. My first case was a young lady twenty years old, who had not menstruated in five months. I had been treating her for three months with our usual remedies without any effect from anything I gave her, so I made up my mind at once to give indigo a trial, which I did with the following result: I ordered indigo ℥ij., subnitrate of bismuth ℥ss., well mixed. She had taken ½ teaspoonful in ½ of glass of water three times daily for nearly four weeks, when one day I was sent for in great haste to see my patient. On my arrival I found my patient on the bed and comfortable. I asked why I was so hastily called; I was told by the mother that her daughter had been walking in the garden, when without any pain or warning of any kind, she began to flood. There was a gush, followed with a gentle flow that lasted only for a little while. In five days she was well, and has not suffered from amenorrhœa since.

I have since then used it in thirteen cases with but one failure, and that lady proved to be pregnant. To test its effects I have given the remedy in the amenorrhœa of phthisis, and have always had a definite result, namely, the appearance of the menses, the menses stopping when the remedy was stopped. After using the remedy for twelve or fifteen months, I procured from Mr. O. G. Zers, an apothecary of Lafayette, Ind., a concentrated extract, as he called it, five grains equalling twenty-six grains of the crude drug. The effects with the crude drug and the concentrated extract, is the same, except that the nausea does not occur when the extract is used. The menses come on painlessly and very suddenly. There is no warning given. In seven cases the effects occurred in about two weeks after the treatment was begun; in five, I had to continue the treatment four weeks; in the other, by the time she had taken the remedy three weeks I found out beyond a doubt my patient was pregnant; however, I had no abortion in this case, my patient went on to full time.

My last, or thirteenth case, is a young lady

* Read before the Tennessee State Medical Society, April 15, 1891.

twenty-six years old, and the very picture of health now, and also when her menses fail to make their appearance. She can, and has gone four months without menstruating, and never have a pain or an ache, never complaining, only saying she was afraid of going into consumption if her menses did not become regular. I have treated her three months with our usual remedies without any effect whatever, but I can give her indigo ten days, and her menses will come on and be regular for several months.

During the administration of the drug the os uteri becomes soft and patulous, admitting the end of the index finger. There is often a serous discharge from the vagina. The urine becomes of a brownish green color, and offensive odor. The stools are watery and offensive.

To summarize; indigo is an emmenagogue of decided value in any case. Dr. Yount says, it should not be given to pregnant women; it should not be given where there is an irritable stomach; it should not be given where there is a history of previous pelvic inflammation; it should not be given where there is marked cerebral anæmia. However, I have never noticed the effect of indigo in any of the above cases, except the first (pregnancy) and that woman went to full time after taking indigo three weeks. The concentrated extract may be given in doses of five to ten grains, three times daily. The powder of the crude drug should be given mixed with a small quantity of bismuth subnitratis, and the patient should drink a little whiskey or sherry wine afterwards. In cases in which it is given for a long period, give Tr. gentian. comp. after each dose. Give the concentrated extract in capsules mixed with extract of gentian and bismuth subnitratis.

MILK AS A MEDIUM OF CONTAGION IN TYPHOID FEVER.[1]

BY EVERETT J. BROWN, M. D.,
DECATUR, ILLINOIS.

I wish to report a number of cases of typhoid fever occurring recently in the city of Decatur, in which the origin of the disease could be directly traced to the milk supplied by one dairyman, in whose family there existed two cases of the disease. Within two months after the development of the first case in the family of this dairyman, there appeared in rapid succession five other cases of the disease, in as many different families, all of which derived their milk supply from this dairy. The families in which the disease appeared lived in portions of the city widely distant from each other, so that there were no local causes affecting them all alike; another point of importance was that there were scarcely any other cases of the disease in the city at that time.

We can safely say then that the milk of this dairyman was infected, and that it was the medium of contagion for the disease. Our first thought would be that the milk supplied to these families had been diluted with polluted water, or at least that the milk utensils had been washed with water containing the disease germ; this could not have been the case, however, for on the premises of the dairyman there were no wells or cisterns in use, the water used by the family being derived from the common water supply of the city, and as this is the almost universal drinking water of the town, it is evident that the milk was not contaminated by it, even if diluted with it.

On inquiry it was found that the person having charge of the milk of the dairy—such as the straining, etc.—also assisted in the care of the two members of the family sick with the disease—washing their clothing and bed linen, and preparing their food; this I think, explains the manner in which the milk became infected: by the failure of this person to observe the ordinary acts of cleanliness, the poison was undoubtedly carried directly from the sick room by means of the hands or articles used in the room, to the milk or the vessels containing it; it is what Dr. Cyrus Edson calls "digital infection," and is regarded by him as a very frequent manner in which the disease is transmitted, and explains many cases, the origin of which seems obscure.

In investigating the causes of typhoid fever, we can safely accept three propositions as thoroughly proved:

1. That the exciting cause of typhoid fever is a specific organized pathogenic germ, called by Eberth the "bacillus typhosis," which is constantly found in the various organs and fluids of the bodies of persons suffering from the disease.

2. That the germ is invariably derived from a previously existing case of the disease, and is never developed *de novo* in filth or decomposing organic matter as was formerly supposed.

3. That "the poison is always tangible,

[1] Read before Illinois State Medical Society, May 1890.

and like cholera, can never infect through the medium of the atmosphere, but must enter the stomach of man, in his food or drink.

It is probable that the large majority of the cases of typhoid fever are due to the use of either polluted water, milk, or meat, although any kind of food may become infected. In milk the typhoid germ is in its element; it there finds the very best possible medium for its rapid growth and reproduction; it is in a culture fluid in which it finds all the conditions necessary for its development.

The presence of the poison in water and in ice is easily accounted for, especially in a neighborhood where cases of the disease have occurred, and where the ordinary precautions, such as the disinfecting of the discharges, etc., have not been taken; its presence in milk or other food, except in those instances where polluted water has been added to these, and, provided we reject the theory of atmospheric contagion, can only be accounted for by assuming that the poison has been carried directly from the sick persons to this food; the hands, the clothing, or the many articles used about the sick room may be the carriers of the poison. A nurse having charge of a typhoid patient cannot possibly keep the hands entirely free from contamination; the sputa as well as the excreta may infect the fingers; dishes, knives and forks, door-knobs, etc., may receive enough of the poison to infect the hands of those who subsequently touch them.

That typhoid fever is a preventable disease, there can hardly be a question, and if it could only be universally regarded as such, and be placed in the same category with the other preventable diseases, such as septicæmia, pyæmia, erysipelas, etc., and if the physician would practice the same scrupulous cleanliness—the same antisepsis—that is practiced by the surgeon, much would be done to eradicate this terrible disease. The typhoid germ is very easily destroyed by the ordinary means of disinfection, such as the use of heat, carbolic acid, and bichloride of mercury; in fact, antisepsis about a typhoid patient is as easy of attainment as it is in a surgical case.

Many rules have been laid down for the prevention of the disease and for checking its spread, but they may all be summed up in two short sentences:

1. Complete and thorough disinfection of all the discharges from the patient.
2. Absolute cleanliness.

HOW TO USE MYDRIATICS.

BY EDWARD JACKSON, M. D.

PROFESSOR OF DISEASES OF THE EYE IN THE PHILADELPHIA POLYCLINIC; SURGEON TO WILLS EYE HOSPITAL, ETC.

The present purpose is to discuss methods, not indications, for using these drugs; but, in passing, it is worth repeating, since it is so often forgotten, that remedies of this sort are too powerful to be used indiscriminately. If one has not been able to make a positive diagnosis in a case of ocular inflammation, to clearly recognize the indications, and to definitely exclude the contra-indications for one of these drugs, he should let them alone, and confine his hit-or-miss prescribing to such agents as boric acid, or weak solutions of common salt, whose power for harm is really very slight.

These drugs are applied to the eye for their direct influence on the cornea, iris, or cilinary body. In either case they must be absorbed through the cornea, the lymph streams of which are in close relation with those of the anterior chamber. Any portion of the drug that may be absorbed from other parts of the conjunctival sac is carried into the general circulation without coming in contact with the structures it is intended to influence. Any solution placed in the conjunctival sac is almost immediately diluted by the lachrymal secretion present; only the part with which it first comes in contact receives it of full strength. Now, if the amount of fluid instilled is very large as compared with the amount of tears diluting it, the dilution is of very little importance. But instillations of large amounts of mydriatic solutions are not advisable, because they give the maximum of absorption into the general circulation with the maximum of effect on the eye, And one thing to be constantly guarded against in the use of mydriatics is the excess of constitutional action. Therefore, a mydriatic solution used in the eye should be instilled so as to come immediately in contact with the cornea while of full strength; that is, it should be placed at the upper margin of the cornea, allowed to flow over the surface of that membrane, and the closure of the lids prevented as long as possible, to allow absorption to occur before the fluid is swept away by the movements of the lids and diluted with the tears.

Instilled in this way, the concentration of the solution when it comes in contact with

the corneal tissue, and consequently the amount absorbed, may be ten times as great as if the single drop of the same solution had been placed in some other part of the conjunctival sac. Thus applied, a very small drop of solution suffices to bathe the whole cornea. A dropper giving a small drop is therefore to be chosen. One is readily obtained with a small point that will drop half-minims, or even less. The use of such a dropper allows the employment of stronger solutions than it would otherwise be safe to employ, or a large number of instillations may be made in the same space of time without producing symptoms of mydriatic poisoning.

It is by attention to such a minute point of technique that one surgeon will at once secure the dilatation of an inflamed iris, or the complete relaxation of the accommodation under homatropine, where another less careful will fail to attain the end sought, or to give relief to his patient. And even where the utmost power of the mydriatic does not need to be exerted, to obtain the effect that is required with the least danger of constitutional symptoms, or with the minimum of constitutional disturbance, is a very important point; for these symptoms, although really not indicating any danger to life, are extremely annoying and alarming to the patient. They occur quite frequently after the use of mydriatic solutions, and such occurrence has much to do with the objection of patients to the use of mydriatics in the diagnosis of ametropia.

The strength of the solution of one of these drugs to be used in the eye varies with the purpose for which it is used. To break up the adhesions in a case of iritis, the stronger mydriatics are to be employed and in strong solution; as atropine sulphate 1 to water 50, or about 10 grains to the fluidounce; daturine sulphate 1 to water 100, or about 5 grains to the fluidounce; duboisine sulphate 1 to water 100, or about 5 grains to the fluidounce; hyoscyamine sulphate or hydrobromate 1 to water 100, or about 5 grains to the fluidounce. The effect of either of these solutions may be somewhat increased by using cocaine with it. But the patient should not be intrusted with the cocaine solution for home use, because the temporary comfort it gives, in many cases, leads sometimes to dangerous excess. Either of the above solutions is to be used one small drop in the eye at a time at intervals of ten minutes until the dilatation of the pupil is secured, and then at such intervals as may be necessary to maintain such dilatation; and continued three times daily until it can be replaced by a weaker solution.

In making the mydriatic attack on a case of plastic irritis, it is, to a certain extent, simply a question of whether we can get enough of the mydriatic into the eye without getting too much into the general circulation. And to accomplish this we must prevent the solution from making its way into the tear passages, and so being absorbed from the respiratory and digestive tracts, as well as from the conjunctiva. For this purpose it is often recommended to make pressure on the inner canthus. But such pressure is quite ineffective. Even the placing of a little clamp on each canaliculus, as proposed by Dr. Tansley (*Trans. Amer. Opthalmological Society*, 1888,) does good mainly by the displacement of the puncta that it causes. The most effective means is to so draw on the skin of the lids as to evert the puncta, and hold in contact with them a small pledget of dry absorbent cotton. This will prevent the passage of any fluid from the eye into the lachrymal sac, and permit us to apply the mydriatic vigorously to the cornea.

For paralyzing the accommodation of the eye, solutions of the same drugs of about half the above-mentioned strengths may be instilled three or four times daily.

Probably a single efficient instillation of this kind, or at most two or three would be sufficient to produce complete paralysis of the accommodation in almost every case, with the eye in anything like normal condition. But frequently the instillation must be intrusted to unskilled hands, and so may produce but a small fraction of its full effect, and in a few cases the active hyperæmia, caused by the mydriatic and involving the anterior segment of the globe, may increase the difficulty of attaining complete ciliary paralysis; so that it may be necessary to continue such applications for some days.

For simply paralyzing the accommodation, however, our most valuable agent is homatropine, commonly used in the form of the hydrobromate. Of this a two or three per cent. solution, ten or fifteen grains to the fluidounce, should be instilled every five or ten minutes until at least four efficient applications have been made. Used in this way, I have found it a perfectly reliable and efficient paralyzant of the accommodation, even in the presence of high grades of retinochoroidal irritation and general hyperæmia of the eye. But we have not with this drug the excess, or reserve of power to control the ciliary muscle, that is possessed by the other

mydriatics named. Every instillation or at least a sufficient number of them must be efficient. The cornea must have the chance of absorbing the solution at nearly its full strength; and for that reason the application of the drug must be intrusted only to skilled hands, usually attended to by the surgeon himself.

To bring about simple dilatation of the pupil our choice of the drug will be determined by whether the dilatation is to be long sustained as a measure of treatment, or only temporary as for purposes of diagnosis. In the former case atropine is to be used, in the latter, homatropine or cocaine. Atropine or homatropine should be employed in a solution one-tenth the strength of those used for paralyzing the accommodation, or even weaker than this. The atropine to be repeated as often as the pupil contracts again, say once every one, two or three days; the others, of course, used only the once.

Cocaine, which is of especial value as a dilator of the pupil, is to be used in solutions of the ordinary strength ordinarily employed for producing local anæsthesia of the eye, that is, two to four per cent. But the instillation must be made at least thirty minutes often an hour, before the dilatation is desired, the anæsthetic action often having quite passed away before the dilatation of the pupil becomes noticeable, and repeated instillations do not very greatly hasten this dilatation. As a paralyzant of accommodation cocaine has very little power, and by itself is not at all valuable for the purpose. But it can sometimes be advantageously combined with homatropine. Here the frequent repetitions of the instillation, as in the case of iritis, give the advantage of local anæsthesia, greatly lessened resistance on the part of some patients, and prevention of the excessive secretion of tears that follows each instillation of homatropine alone and by dilution of the solution lessens the intra-ocular effects produced, as well as an apparent hastening of absorption. For this purpose the solution may be made with two or three per cent. each, of cocaine and homatropine.

The instillation of a strong solution of any of the mydriatics causes a pericorneal hyperæmia, which, though not serious, is sometimes alarming to the patient or his friends. This phenomena I pointed out in a paper on homatropine, published in *The Medical News*, July 18th. It is especially liable to occur from the use of homatropine, because this is more likely to be used in stronger solutions. The combination with cocaine lessens this tendency to a considerable extent.

Selected Formulæ.

FŒTID BREATH.

This may arise from decaying teeth, or it may come from some stomach difficulty, as impaired digestion; lung troubles may cause it. In any event, thorough cleansing of the teeth and a camphorated dentifrice is by many thought more useful than other varieties. The following formulæs are commended by various authors as to the several sources of the trouble. The active materials for disinfecting being one of the following articles: Carbolic acid, chlorine water, potassium permanganate, thymol, salicylic acid, camphor, borax.

1. Camphor water; water, equal parts; use as a mouth wash.

2. Thymol, 10 grains; alcohol, 1 ounce; borax, 30 grains; water 19 ounces.

3. Potassium permanganate, 8 grains; water, 8 ounces.

4. Chlorine water, 1 ounce; glycerin, 2 fluid ounces; water, 14 ounces.

5. Salicylic acid, 120 grains; glycerin, 2 fluid ounces; water, 6 ounces.

6. Borax, 240 grains; water, 1 pint.

7. Chlorinated lime, 120 grains; sodium carbonate, 160 grains; water, 6 ounces; alcohol, 2 ounces; rose water, 12 ounces. Dissolve the sodium carbonate in 2 ounces of the water, rub the chlorinated lime to a paste with water, adding in all 4 ounces; mix in a 12-ounce bottle, adding the alcohol. After the reaction separate the clear solution and add to the rose water.

8. Salicylic acid, sodium bicarbonate, saccharine, each 60 grains; alcohol, water, each 4 fluid ounces; oils of peppermint, 5 drops. Of this solution, use two teaspoonfuls to a wineglass of hot water, and use as a gargle twice daily.—*Pharm. Rec.*

TREATMENT OF URTICARIA.

Quinquaud (*La Tribune Médicale*) recommends in cases of intermittent urticaria, quinia, but preferably arsenic. In the chronic form, baths and hydrotherapy in all its forms are to be absolutely forbidden. On the other hand, wrapping the patient up in cotton batting is often excellent. Internally alkalies, arseniate of soda, naphthol, are indicated.

For the pruritus he advises:

℞

Aq. lauro-cerasi	grammes	50.
Chloral	"	5.
Aquæ	"	200.

M.

Or,

℞ Ether.....grammes 30.
Tepid water..... " 60.
M.

Also a powder for dusting on the surface:

℞ Amyli.....grammes 50.
Zinci oxid..... " 10.
Or
Acid. salicyl..... " 5.
M.

When fresh outbreaks supervene, one-fourth of a milligramme of aconitine in divided doses will prove serviceable.

PERMANGANATE OF POTASSIUM IN DIPHTHERIA.

Dr. Netzetzky says that his twenty-two years' practice convinced him that the best treatment of faucial diphtheria consists in an energetic use of permanganate of potassium. The drug should be administered in the shape of paintings and gargle. The following strong solution should be employed:

℞ Potassii permanganatis.....3 j.
Aquæ destillatæ.....3 j.
M. Sig. To paint the affected surface every three hours.

For gargling, which is to be repeated as often, a teaspoonful of the same solution should be mixed with a tumblerful of boiled water.

In those cases in which the child is unable to gargle, the following mixture should be given internally:

℞ Solutionis hydrogenis superoxydati, two per cent.....3 ij.
Glycerinæ.....3 ij.
M. Sig. A teaspoonful every two hours.

TREATMENT OF SYCOSIS.

Rosenthal in the *Annales de Dermatol. and de Syphilog*, recommends the following method, which possesses the advantages of facility of application, freedom from pain, and relatively rapid cure.

The diseased surfaces should be carefully shaven each day and the following ointment applied two or three times a day:

℞ Tannic acid.....grammes 1
Sulphur..... " 2
Vaselin..... " 10
M.

After the friction with this ointment at night, an emollient ointment, Wilson's or Hebra's, may be applied.

The writer has also recently employed with good results the following paste:

℞ Tannic acid.....grammes 5.
Sulphur..... " 10.
Oxide of zinc.
Starch., aa..... c.cm. 17-50.
Vaselin..... c.cm. 50.
M.

This may be applied night and morning. By this method epilation may be dispensed with.

HAY ASTHMA.

℞ Cocainæ hydrochlor.....3jss.
Glycerini.....f 3iij.
Aquæ destil.....f 3v.
M. Sig. At the onset of the attack make two applications, with an interval of five minutes, by means of a brush, to the accessible nasal mucus membrane.

℞ Cocainæ hydrochlor.....3ss.
Benzoini, pulv.....3jss.
Sacchari, pulv.....3ss.
M. Sig. Use as a snuff.

—*L' Union Méd.*, April 18, 1891.

CHLOROSIS.

Liégeois (*Lyon Medical*, in *Boston Med. and Surg. Journal*) has obtained very satisfactory results from the following formulæ, suggested by Luton:

℞ Cupri acetatis neut.....gr. ⅙.
Sodii phosphat., cryst.....gr. ¾.
Pulv. glycyrrhizæ
Glycerinæ., aa.....q. s. M.
Ft. pil. j.

One or two pills before eating, noon and night.

CHOLAGOGUE TABLETS.

℞ Sodii benzoatis
Sodii salicylatis } aa.....3j.
Rhei pulv.
Ext. nucis vomicæ.....gr. v.
M. Ft. tabellæ no. xx.
Sig. One at each meal.

—HUCHARD, *La Méd. Mod.*, May 7, 1891.

INFANT FEEDING.

Dr. Toussains states that he has prevented derangement of the alimentary canal of infants during hot weather by giving after each meal a teaspoonful of the following mixture:

℞ Papaini..... gramme 0.5.
Acid lactici.....grammes 2.0.
Aqu. dest..... " 150.0.
Syrup simpl..... " 50.0.
Tr. vanilli, q. s.
M.

Besides, he gives as nourishment, equal parts of milk and Vichy water, together with malt flour, in teaspoonful doses, diluted with four times the quantity of hot water.

In some cases the milk was omitted, and malt flour alone was given as a nourishment, and white of egg, water, with a little rum and sugar, as a drink.

In many cases the beneficial effect of malt flour (*Farine maltes de Dupresne*) was noted.
—*Cent. f. g. Ther.*

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The Editor will be pleased to get medical news, but it is important that brevity and actual interest shall characterize communications intended for publication.

LEADING ARTICLE.

THE ACTIONS OF OPIUM AND MORPHINE IN THE INTESTINES.

In spite of the extended use of opium and its alkaloids in diseases of the intestinal tract, we have been, up to the present, very largely ignorant of the exact therapeutic action of these drugs, and the knowledge which we have experimentally gained has been but fragmentary. Neither has it been conclusively shown why opium, in these diseases, has been empirically given the preference to morphine, the latter drug being so easy of administration and always readily obtained in absolute purity.

To satisfactorily answer these interesting questions has been the effort of Dr. Wilhelm Spitzer, and the article in which he gives the results of his experiments was given the prize of the University of Breslau this year, and has subsequently been published in *Virchow's Archives*, Vol. 123, No. 3, 1891.

The article opens with a historical review of the experimental researches of the actions of opiates, on the intestines of both cold and warm blooded animals, in order to prove whether opiates do not exert, apart from the cerebro-spinal action, a local or regionary action, by resorption. Further, the comparative study of the gastro-intestinal actions of opium and morphine, and also whether, as has been generally empirically accepted, the first-named drug is not weaker in its anti-diarrhœic and anodyne properties than the latter. The review shows, however, that the works of previous writers do not satisfactorily or conclusively answer these questions.

While this portion of Dr. Spitzer's work is of great interest, we will turn aside from it and briefly consider the results of his experiments upon the human organism. Of these very many were upon healthy subjects. During certain fixed periods, opium and morphine were given by the stomach, and hypodermically, and their constipating actions carefully noted. The cases were carefully

chosen from among inmates of the Almshouse and convalescents from Hospitals. All were equally well nourished and received about the same amount of exercise, etc. Naturally, only such subjects were chosen who did not habitually use any opiates, and whose bowels were habitually regular, all being in the habit of defæcating at certain fixed hours of the day. It was clearly proven by these experiments that opium given subcutaneously did not exert any greater constipating action than the morphine represented in the dose would have done.

The following is a brief resumé of the principal experiments.

First.—In the majority of subjects, defæcation took place in the morning, and in order to retard this action for twenty-four hours, on an average 0.01 gramme, or at the most 0.02 gramme of morphine given subcutaneously, was required. Twenty-six experiments upon sixteen different subjects, with hypodermic injections of morphine, resulted as follows: Three experiments with 0.004 gramme, and two experiments with 0.006 gramme resulted negatively. In ten experiments 0.01 gramme was injected, and of these five resulted negatively and five positively. In the latter, the delayment of defæcation was six hours in one case, twenty-four hours in three cases, and thirty hours in one case. With the hypodermic dose of 0.015 gramme, eight experiments were made, and in five instances constipation was induced, lasting eighteen hours in one case, and twenty-four hours in three cases. In three cases, finally, a delayment of defæcation, lasting for twenty-four hours, could only be produced by doses of 0.02 gramme. In the majority of the experiments of this series, the author began with small doses, and gradually increased them until the desired effect was obtained.

Second.—The aqueous extract of opium was used hyperdomically in twenty-three experiments upon fifteen different subjects. In order to delay the time of habitual defæcation for twenty-four hours on an average, 0.1 to 0.15 gramme was necessary. The lowest quantity injected was 0.025 gramme in one case, and the result was negative. 0.03 gramme was used eight times; once it occasioned a delaying of defæcation for eighteen hours, but in the other cases it had no effect. Doses ranging from 0.04 to 0.08 gramme were tried in several cases, but had no constipating effect. Injections of 0.1 gramme caused a constipation lasting for twenty-four hours in two cases, but in two other cases it was without result. 0.15 gramme was tried in two cases, causing constipation for thirty-six hours.

The above experiments demonstrate that the aqueous extract of opium, given hypodermically, does not constipate unless given in doses of 0.1 to 0.15 gramme, and that then the action is the same as would be achieved by the morphine the drug contains, viz: 0.01 to 0.015 gramme, or ten per cent. There is, therefore, no advantage in using the extract of opium hypodermically in place of morphine. Quite the contrary, indeed, for the author noted that frequently where 0.05 gramme of the extract of opium had been injected, and in two cases only 0.03 gramme, unpleasant accompanying effects were induced, such as dizziness, headache and excitability; while in equally as constipating doses of morphine no accompanying symptoms other than sleepiness, and rarely vomiting, were noted. According to Spitzer, therefore, it is a mistake to use opium hypodermically in place of morphine when a constipating action is desired.

Third.—Regarding the exhibition of opium per os, either in the form of the simple tincture, the aqueous extract, or pure opium, it was found that the constipating dose was somewhat smaller than that required in hypodermic injections of the drug. Often 0.06 gramme produced the desired result. It was also shown that both the extract and pure opium, were more active than the tincture.

Fourth.—Upon a large number of subjects who had previously been tested in the experiments on the constipating action of opium given internally, the comparative value of morphine given hypodermically was tried, and a comparison of the results of these with the experiments of the third and first series showed that opium given internally in any

form produced constipation somewhat more easily than morphine given either hypodermically or per os. The experiments further showed that the accompanying symptoms produced by morphine, given either by subcutaneous injection or by mouth, were far more severe than those caused by opium when given by the mouth. The author, therefore, claims that in practice, the exhibition of opium per os should always be preferred to the administration of morphine when a constipating action is desired.

Regarding pathologically quickened peristalsis, the ætiology of the various forms of diarrhœa alone showed that an easily induced anti-diarrhœic action results from the use of morphine, but the difference in intensity is slight. In all cases the aqueous extracts of opium acted the best. It was given in a mucilagious vehicle (gum arabic) and in small doses, of about 0.02 gramme six times a day. In a few cases the extract was of decided greater efficiency than the other preparations.

In the treatment of diarrhœa, morphine was given in sixteen instances to ten different patients—eight times internally and eight times hypodermically. To obtain the desired action, in three cases 0.01 gramme of morphine per os was found necessary, in four other cases 0.015 gramme, and in one case 0.03 gramme. When given hypodermically similar results were obtained by 0.01 gramme in two cases, 0.015 gramme in one case, 0.02 gramme in three and 0.025 and 0.03 in one case each. In these as well as the following experiments the treatment was always commenced with small doses, which were gradually increased until intestinal rest was obtained.

The aqueous extract was given internally in six cases, and subcutaneously in eight cases. In the former instance the required dose ranged from 0.04 to 015 gramme. Subcutaneously, a similar action was obtainable with 0.075 gramme and 0.01 gramme in two cases each, 0.15 in one case, and 0.2 gramme in three cases.

The simple tincture of opium was given in twelve cases. In five of these 0.5 gramme was sufficient to check the diarrhœa, in four 0.75 gramme, in one 1.0 gramme, and in two 2.0 gramme accomplished like results.

Pure opium, which, of course, was only given internally, exerted an action similar to that of the aqueous extract, when given similarly.

From these experiments it will be seen that in cases of diarrhœa, opium only when given per os, acts somewhat better than morphine, but that otherwise their actions are equal.

As an intestinal anodyne when given internally opium acts somewhat more rapidly than morphine per os. When, however, the pain is intense, and a rapid therapeutic action is desired, subcutaneous injections of morphine of 0.01 to 0.015 gramme were found to be the most efficient remedy.

Spitzer's experiments with other alkaloids of opium, including codeine, papaverine, narcotine and narceine, resulted negatively, at least in doses which were free from unpleasant accompanying effects.

In opium and morphine we have one of our main bulwarks of therapeutics, and anything throwing light upon their exact therapeutic value and use, cannot fail but be of more than ordinary interest and practical service to the busy practitioner, and the profession is certainly indebted to Dr. Spitzer for some exceedingly valuable data.

Correspondence.

A SINGULAR CASE.

The following letter setting forth a very exceptional case of long suffering from pulmonary trouble, we publish at the request of the sufferer, who has the hope that some good to science and humanity may result from the publication:

Dear Sir:—I have good reason to believe I am a sufferer from one of the most peculiar forms of pulmonic troubles with which any mortal has ever been afflicted, and while I have no desire to obtrude myself or my troubles upon the public, I have concluded to make the facts of my case known, in the hope that they may attract the attention of some medical expert who may be able to tell the source of my afflic-

tion, or may learn from my case something that may be a benefit to other sufferers.

I was born in 1834, and two years after I was attacked by what the physicians attending me pronounced palpitation of the heart. This illness left me with a serious form of lung trouble, from which I have suffered ever since, and to me it is a most astonishing fact that I have lived to be heard of, and it is a mystery which no physician I have met with has been able to fathom. I have coughed almost constantly and have raised at least one pound of mucus matter per day for fifty-four years, an aggregate of nearly ten tons, from my lungs. Some will doubtless say they do not believe this, but I am prepared to prove it.

I have suffered all my life from trouble and have lain in bed for weeks and months at a time. Twice in my life I was so low and emaciated that my back bone and my elbows came through my skin; but through all God has spared my life—I hope for some good purpose.

My condition and the trouble I have passed through has been a source of astonishment to all the physicians I have met; but I have never yet met any two who agree with regard to my trouble. They all have had different theories about it. I never expect to recover, but I have always thought that I may meet with some medical expert who, by examining me, may be able to locate my trouble and tell me the cause of it.

To have such knowledge would render me very happy indeed, and to obtain it I am willing to go to any part of the United States to be examined free of charge. Besides, I believe that the knowledge to be obtained from my case would be of much advantage to medical science.

Except in extreme cases, I have always doctored myself with herbs, and I believe the reason that I have been able to fight this cough and trouble off so long is that my nervous system never gave out.

SAMUEL GORDON,
South River, N. J.

INVAGINATION OF THE BOWEL.

ED. MEDICAL AND SURGICAL REPORTER.—

The 1st of July G. I. T.—, a man of 70 years, of this place, had a few fæcal motions; the last attempt was bloody mucus. Pain continued in the bowels, with occasional vomiting, which on the 5th was stercoracious. All attempts to move his bowels, which were supposed to be loaded, having failed, large enemas were attempted to reduce the difficulty. The morning of the 6th I saw him with one of his three physicians, but found no paralysis of the bowels, which had been diagnosed as his trouble. The abdomen was soft and tender from flatulence, but eased by continued pressure.

After a long enema, it was ejected simply discolored. An active cathartic was prescribed, in hope of dislodging the invagination.

℞

Chlor hydrarg. mit.....gr. ij.
Ex. hyoscyan.....gr. jss.
Podophyllini.....gr. ⅛.
M. et div. in pil. nos. v.
Sig. One pill to be taken every two hours until relieved.

Egg-nogg to a half-pint with 2 oz. of whiskey, was given every four hours. He took five pills and before the time for the sixth, they began to act. Five motions followed.

On the morning of the 7th he was relieved from all distress, craved beef-steak. On the 8th he was improving, and on the 9th rode out. On the 10th was in a wheat field directing the work. Respectfully,

EDWARD VANDERPOEL,
New Suffolk, N. Y.

BOOK REVIEWS.

MANUAL OF THE DOMESTIC HYGIENE OF THE CHILD. FOR THE USE OF STUDENTS, PHYSICIANS, SANITARY OFFICIALS, TEACHERS AND MOTHERS. By JULIUS UFFELMANN, M. D. Edited by Mary Putnam Jacobi, M. D. E. P. Putnam's Sons: New York and London, 1891.

This is a work that bids fair to become classical at once; for while it is thoroughly scientific in every detail, and thorough even to minuteness, it is written in such a way that any mother of fair intelligence will have but little difficulty in understanding it and absorbing its truths.

The author rightly realizes that "the entire constitution of the adult—his power of resistance, his capacity for work—depends first of all upon his childhood, and upon the care he may have received during the formative period of his existence;" and while most writers on this subject are content to treat only of the earlier years of life, Prof. Uffelmann has given just as faithful study to the period preceding adolescence as to that of infancy and childhood. The question of the nature and preparation of the various foods for children is thoroughly discussed, valuable advice is given as to the care of the body in general and of its different organs or

systems, and the anthropometrical tables furnished a standard by which the growth and development of the child can be rightly judged. Thanks to the additions of Dr. Jacobi—which have been included in the text in brackets,—the work is made additionally clear for the laity, and that class of educated and intelligent women who wish to know as much as possible about the proper care and supervision of their children's development will, as well as the physician, find this book most worthy to be added to their libraries and to be studied and restudied many times.

PERISCOPE.

THERAPEUTICS.

THERAPEUTICAL USES OF MENTHOL.

The drug has an undoubted sedative action upon the mucous membrane of the stomach, and often gives relief in gastralgia, nervous dyspepsia, and some forms of acute indigestion.

I often employ this formula with success:

℞ Mentholis..... grs. v—viii.
Elix. lactopep... ..... ʒ i.
M. Sig. To be taken in hot water every hour until relieved.

In cases of obstinate vomiting, the same dose dissolved in lacto-peptine or brandy will often afford relief.

In some forms of neuralgic or irritative headache, as well as those for which we are wont to prescribe the coal-tar products, menthol, in 10-grain doses in hot whiskey is sometimes very effective.

In most varieties of pruritus, whether general or local, the following lotion is quite reliable:

℞ Mentholis..... ʒ i.
Spts. vin. rect..... ʒ i.
Aquæ..... ʒ ij.
M. et adde.....
Acid. acetic. dil..... ʒ v.
M. Sig. Apply with sponge as required.

In localized skin diseases where an antipruritic ointment is needed, the following is a good combination:

℞ Campho-phenique..... ʒ i.
Mentholis..... grs. xxx.
Ung. aq. rosæ..... ʒ i.
M.

In all cases where the skin is broken or denuded, campho-phenique gives better results than menthol. The latter may be combined equally well with zinc, balsam of Peru, or tar for these purposes.

Mentholated cologne forms a very comfortable and effective evaporating lotion in congestive headaches and similar conditions. It forms also a valuable ingredient of liniments of various kinds, to which it may be added in the proportion of thirty grains to the ounce.

All are doubtless familiar with its anæsthetic effect when used in the form of a spray in combination with ether and chloroform.

The action of the agent upon various affections of the respiratory organs is also well marked. Here the menstrum or solvent should be some of the bland oils like petroleum, or, what I have found still better, albolene or glymol. A solution of twenty or thirty grains of menthol to an ounce of glymol, applied to the nasal passages by a proper atomizer, is the best thing I have yet used for colds in the head where there is almost complete occlusion from congestion of the mucous membrane. In the more chronic catarrhs of the naso-pharynx, the results are sometimes equally good.

A similar solution often affords relief in cases of acute or chronic laryngitis and laryngeal cough, and phthisical patients remark forcibly upon the relief afforded by it in these conditions. To the solution of creosote, chloroform, and alcohol commonly employed in the Robinson and similar inhalers, menthol in 20-per-cent. strength may be added with good effect.

Certain forms of sore and irritable throat are greatly benefited by a gargle composed of an alcoholic solution of this drug.

The uses of menthol are almost infinite, and being readily soluble in alcohol, ether, and the various oils, can be administered in many different forms.

It is a decided anæsthetic, an alterative, an antiphlogistic, and an antiseptic.—Dr. J. J. Berry in the *Med. Mirror.*

THE TREATMENT OF HYDROCEPHALUS.

Ouiniche, of Kiel, has made some interesting observations upon the treatment of acute and chronic hydrocephalus by paracentesis. The symptoms of cerebral compression are the indications for active treatment. In operating, the author makes the punctures through the cranial bones, sometimes with a very fine drill, or sometimes he has used a trephine to make an opening through the osseous tissue. He has also punctured the spinal canal in the lumbar region. The lumbar puncture is made by means of a grooved needle introduced through the skin, and between the vertebral arches into the sub-aractenoid cavity, without injuring the

roots of the nerves or the spinal cord. The author relates some cases in which the pressure signs were much relieved by the lumbar puncture. In acute and chronic hydrocephalus, as well as in tubercular meningitis where signs of pressure are present, the withdrawal of serous fluid from the aractenoid sac is attended with much relief.—*Med. Press.*

TREATMENT OF OXALURIA BY PERMANGANATE OF POTASH.

Dr. H. J. Norris, writes in the *Mass. Med. Jour.:* When the deposit of oxalate of lime occurs, as it frequently does, associated with free uric acid and the urates, we are apparently involved in a contradiction as regards treatment. While the one, the uric acid deposit, is often treated with advantage by alkalies, the other requires the mineral acids. We adopt the view of Dr. Prout, that, "the oxalate of lime diathesis, and the uric acid diathesis, are of the same general nature; and being of a similar nature, the principles of treatment adopted for counteracting the original tendency to it, must be also similar." There cannot be any question but that urea, uric acid, and oxalic acid are much the same thing though at a different stage of formation; for one is easily converted into the other, out of the body by very simple chemical means; and there is reason to believe that, in the organism they are the products of physiological waste of the same tissue. We do not hesitate, therefore, to affirm that the uric acid and oxalate occur as the result of a deficient oxidation.

When we consider the fact, that uric acid may disappear entirely from the urine, and that oxalic acid is not normally present, is it not fair to conclude that the uric acid must, in the normal condition of things, undergo decomposition in the body? We find that by adding an excess of permanganate of potassa to uric acid out of the body, it is directly converted into urea and carbonic acid; and that when the oxidation is less complete, it passes into the form of urea, oxalic acid, and carbonic acid. If, therefore, we would prevent the formation of uric acid and oxalic acid, we must supply the equivalents of oxygen and of water. This is most conveniently done in the form of permanganate of potassa:

℞ Permanganate of Potassa..... grs. viij.
Water..... f℥ij.
M. Sig.—One teaspoonful to be given three times a day.

It should not be given except on an empty stomach; for in contact with organic matter it is decomposed, yielding its oxygen to any element, simple or compound, that will receive it. Dr. Norris has repeatedly directed, during the past four years, the permanganate to be given as above, in oxaluria, with the most happy results.

PILOCARPIN IN ŒDEMA OF THE GLOTTIS.

At a recent meeting (May 4th–5th) of the French Society of Otology and Laryngology, Dr. Suarez de Mendoza, of Angers, related (*Semaine Médicale*, May 6th, 1891) a case in which he was called in to see a young man attacked by serious œdema of the glottis causing suffocative dyspnœa. Tracheotomy had been proposed, but Suarez de Mendoza, seeing that in the middle of the swelling a narrow slit was still visible during inspiratory effort, suggested that pilocarpin, which he had already found successful in two similar cases, should be tried. Three hypodermic injections were given at intervals of twenty minutes, the total amount of pilocarpin administered being 25 milligrammes. Marked relief followed the first injection, and a quarter of an hour after the third the patient was breathing easily and quietly, and was entirely out of danger. In eight days he was quite well.—*Brit. Med. Jour.*

PHYSIOLOGICAL EFFECT OF BATHS IN TYPHOID FEVER.

Dr. Kurkutoff, who has examined the physiological effects of baths administered to typhoid fever patients in Professor Manassein's clinic in St. Petersburg, finds that such baths exert only a slight effect on the assimilation of the fatty constituents of foods, which, as in other fevers, is notably less than in healthy persons, and indeed varies directly with the gravity of the case; but there seems to be a good deal of difference as to the power of assimilation of fatty matter in different cases, probably depending on the functional disturbance in the bowel and on the amount of the individual peculiarities of the patient. In the graver cases the effect of the baths was to improve somewhat the assimilation of fat to the average extent of nearly four per cent. In slight cases, however, the effect was, apparently at least, to diminish the assimilation to the average extent of rather more than six per cent.—*Lancet.*

TREATMENT OF THE "RED NOSE."

A red nose is a very painful affection, especially when it attacks females. Accord-

ing to Unna, one-fifth of the cases are due to acne rocacea with vascular dilatation. Very often it stands in direct relation to seborrhea of the hairy skin. This seborrhea should be treated in the usual way. When acne rosacea is the cause, Unna gives fifty centigrams (seven and a half grains) of ichthyol daily internally, and at the same time prescribes lotions of the same substance in watery solution externally. At night, applications of the following paste are of benefit:

℞

Zinc pomade	20.0
Rice powder	5.0
Sulphur	2.0

Unna advises multiple scarifications of the dilated veins after Hebra. This should be repeated two or three times a week. The minute wounds should be covered at once with moist absorbent cotton. In light cases, and as supplementary treatment, he advises repeated washings with ichthyol soap. Only warm water should be used.—*Amer. Pract. and News*, May, 1891.

THE TREATMENT OF SPRAINS.

Dr. Duhamel recommends warmly the use of a plaster composed of one part of carbonate of lead in two parts of olive oil as an application to sprained joints. He heard of this remedy when on a visit in Holland, and on his return to France immediately put it to trial in a number of cases. Most of the cases were sprains of the ankle, and the patients were made to walk as soon as the plaster and retaining dressings had been applied. All these cases made a rapid recovery, but one case of a sprain of the wrist, in which the same remedy was applied, did not improve. The cure was obtained in all probability by the exercise of the joint rather than by any especial virtue residing in the white lead.

HYPNOTISM.

Dr. Cruise related, at some length, what he had seen at Nancy, under Drs. Liébault and Bernheim, and his experiences of the clinical instruction on hypnotism by M. Luys at the Charité Hospital in Paris, and of M. Auguste Voisin and M. Guinon, at the Salpêtriere. He discussed the utility of hypnotism, pointing out the cases best suited for it, recounting his own experiences, and replying to the objections, physical and moral, which had been urged against it. He concluded by urging all to study the subject practically before committing themselves to an adverse opinion.—Dr. G. C. Kingsbury pointed out that when Charcot spoke of hypnotism he referred to certain manifestations of disease met with rarely amongst hystero-epileptics, whereas what was meant by hypnotism at Nancy was not a disease but a method of treatment. That this method of treatment was based on common sense was shown by reference to the every-day experience of physicians of the effect of the mind or imagination on the body, and quotations in support of this were given from Stokes, Graves, Paget, and Trousseau. Hypnotism sought by exalting this power to heighten its effect. It was shown that the principle underlying all the methods was the continued stimulation of one or more of the senses, with the constant suggestion of sleep. The further process of treatment was then detailed, and it was shown how the verbal suggestion of relief, of which it mainly consisted, could be greatly emphasized, according to the nature of the case; for example, by friction in rheumatism or neuralgia, by inducing the patient to inspire deeply in pleuritic affections, by ordering the patient to walk in functional paralysis, etc. The process of dehypnotism, or waking, was also explained. The opinion that the subjects of hypnosis were greatly fatigued after the process was erroneous. Any medical man who would take the trouble to study the subject could hypnotise, but here, as elsewhere, individual qualities would tell, some men always being more successful than others. "Who can be hypnotised?" was then considered, and it was shown that as distinctly the majority of people were susceptible, it was more important to know who could not be hypnotised; but Dr. Kingsbury believed he was within the mark in saying that 70 per cent. were hypnotisable, though only 15 per cent. would be found to be somnambulists. Children between 7 and 14 years of age were found to be the best subjects, 50 per cent. being somnambulists. Hysterical people were very difficult subjects. Lunatics were about the worst subjects, while imbeciles were practically impossible. Phthisical patients were particularly susceptible. Sex did not exert any marked influence. Nationality did not seem to be an important factor either, though the Oriental races were held to be the most easily influenced. Ill-health was by no means an essential, some of the best subjects being athletes. Dr. Kingsbury held it to be justifiable to try hypnotism in all cases where a distinctly nervous element could be detected. All functional disorders might also be treated by means of hypnotic

suggestion. Hypnotism might be used in conjunction with drugs, whilst in some cases it might be tried alone. In midwifery, hypnotism seemed justifiable wherever any anæsthetic was thought necessary. It might be employed in many cases of ovarian pain and menstrual derangement. The alienist was justified in trying hypnotism, Voisin having succeeded with 10 per cent. of his patients, and Forel, of Zürich, having hypnotised 14 out of the first 33 patients tried. Moral ailments seemed to offer a wide field for the trial of hypnotism, and included cases of inebriety, morphinomania, cocainomania, kleptomania, masturbation, etc. In surgical cases Dr. Kingsbury declared that if he knew that a patient could be hypnotised deeply, so as to be completely anæsthetised, he would prefer to employ hypnotism rather than chloroform for operative purposes. The dangers of hypnotism were grossly exaggerated. He had failed to find any case where insanity could be shown to have been produced by hypnotism employed by a medical man. It was time that the practice of hypnotism should be confined to the medical profession by right, but he maintained that scientists should be allowed to conduct hypnotic experiments for the elucidation of physiological and psychical problems. All that he asked for was a careful and scientific testing of hypnotism.—Dr. Foot wished to hear a differential diagnosis between mesmerism and hypnotism, because many great men had made shipwreck of their reputations on the rock of mesmerism. He thought that non-organic functional disease was the feeding ground for every form of quackery. He was anxious to hear how long the cures of dipsomania had lasted.—Dr. Joseph Redmond mentioned the case of a girl, aged 19, who had suffered severe pain in the side for five years. All sorts of treatment had been tried in vain. Dr. Cruise hypnotised her five or six times, and completely cured her of the pain.—Dr. M'Cullagh mentioned two cases in which he had performed circumcision painlessly under hypnotism.—Dr. J. J. Murphy related cases of dipsomania, masturbation, etc., in which hypnotism had done good.—Mr. Edward Hamilton, when a young practitioner, remembered a case of fever in which all narcotics failed. He sat by the patient's bedside, and, fixing his eyes on him, wished intensely, almost prayed, that he might sleep. After a few minutes the patient's eyes drooped, and he slept for some hours, which caused him the greatest benefit.—Dr. Connolly Norman said the evils of hypnotism had undoubtedly been absurdly exaggerated, nevertheless there were dangers. In a case of his own he believed general paralysis had originated in the constant practice of hypnotism. There could be no doubt of the service which hypnotism could render, at least for a time, in dipsomania; and in true insanity good might occasionally be done, and many patients were quite susceptible.—Dr. Fitzgerald mentioned two cases in which he obtained great benefit from hypnotism.—Dr. Richard Hayes related two typical cases in which hypnotic suggestion had succeeded in relieving symptoms.—Mr. Wheeler asked what difference there was between hypnotism and electro-biology.—Dr. Cox and Dr. O'Carrol also spoke.—In answer to Dr. Foot, Dr. Kingsbury explained that practically there was no difference between mesmerism and hypnotism. Those who were familiar with hypnotism did not limit its employment to the field of "non-organic functional disorders," but found it useful alone or in conjunction with other remedies in surgery, in midwifery, and in the treatment of many ailments outside the pale indicated by Dr. Foot, such as rheumatism, neuralgia, pneumonia, tinnitus. Dr. Foot had scoffed at the idea of inebriety being cured by hypnotic suggestion, and thought these cures were only the temporary repentances of drunkards recovering from a debauch, such as they all frequently witnessed. If Dr. Foot would read what had been written, he would find well-authenticated cases of inebriates keeping sober for ten or twenty years, which periods certainly exceeded the length of alcoholic remorse. Dr. Norman thought Dr. Voisin deserved in a measure the reception he got at Leeds, on account of his wild extravagance. Perhaps Dr. Voisin did portray the rosy side of hypnotism, but one of the statements made by him, which was at the time considered most incredible, was that the menstrual functions or the action of the bowels could in any way be controlled by means of suggestion. Both these statements had been amply corroborated since. Mr. Wheeler wished to know what relation hypnotism had to electro-biology. It was one and the same thing.—*Brit. Med. Jour.*

MEDICINE.

THE TETANIFEROUS MAN.

Verneuil applies this term to the individual who carries the virus of tetanus

around on his person, although unaffected by the disease himself. The author discusses the causes and means of prevention of this affection from a clinical standpoint. If one considers the horse, with its secretions, excretions and surroundings, as all capable of propagating tetanus, we cannot regard as impossible, infection by the secretions and excretions of man. The tetanic property of equine saliva has been demonstrated. The saliva of a human being may, for the time being, contain tetanus germs, and thus a bite from such an individual may cause tetanus. A case is given illustrating this. The secretions and excretions are only infected by the ingesta, so that the sperm, milk and urine are never infected with the virus.

He says: "I have already admitted, and now I admit more than ever, that a surgeon, who has dressed a tetanoid patient, may communicate the disease to other patients. I also admit that any person whatever, but above all a physician whose hands have been in contact with a horse, not tetanic, but simply tetaniferous, may infect the wounds of his fellow beings, as in the cases cited. I also admit, finally, that such a man is not only dangerous to those whom he approaches but may even give himself tetanus by autoinoculation, either by wounding a part of the skin impregnated with the virus, as the plantar and palmar regions, or touching a wound on any part of his body with his impure hands."

Two cases follow, in which he traces the cause to a wound inflicted on the skin, which was previously infected with the tetanic virus. The bacillus of Nicolalier was found in one of these cases. Three additional cases are given with a very careful analytical study of each.—*Boston Med. and Surg. Jour.*

REGENERATION OF CORPUSCLES IN THE OLIGÆMIA FOLLOWING POISONING BY ACETYLPHENYLHYDRAZINE (PYRODIN.)

Modern research seems to show that in all the infective diseases, both acute and chronic there is a destruction of the red blood corpuscles, and that the work of regeneration by the blood-forming organs is also interfered with more or less gravely by the same morbific influence, this taking place much more slowly than it does in an otherwise healthy person after loss of blood from hæmorrhage. There is this difference between the two conditions. After loss of blood by hæmorrhage, the total volume of fluid in the vessels is rapidly made up by influx of serum from the lymphatics, and the organism only suffers from a temporary diminution, whereas, after destruction of corpuscles, there is not only loss of hæmoglobin, but the presence in the vessels of quantity of albuminous matter and pigment, which has become so much foreign matter. This matter becomes gradually collected in the spleen and marrow of bones, which thus has to fulfil both a hæmatopoietic and an eliminative function. It occurred to Professor G. Mya (*Riforma Medica*, April 28th, 1891) that this eliminative function might interfere with the regenerative duties of these organs. To test this he administered to several animals doses of pyrodin—a substance well known to produce destruction of corpuscles—and compared the time necessary for the restoration of the normal corpuscular richness with that required after extraction of blood from similar animals. He found, however, that very little difference occurred in the two cases, and that regeneration was, if anything, somewhat more rapid in the poisoned than in the non-poisoned animals. Some observations carried out in man, in which the action of the drug was carried to a much slighter extent, entirely confirmed the above results. From this it would appear that the original theory is untenable, and that in infectious diseases the virus itself exerts some direct injurious action on the reparative functions of the blood-forming organs.—*Brit. Med. Jour.*

THE DELIRIUM OF INFLUENZA.

The severe type assumed by the present epidemic of influenza is illustrated by the occurrence of many instances of marked delirium. Reports of several such cases reach us from the midlands. In one very extraordinary case a barmaid, suffering from influenza, was found by a policeman, lying on the pavement, having nothing on but her night-dress. It is supposed that while in a delirious condition she fell through the bedroom window, which was in a second story. If the facts are as represented she must have fallen from a height of fifty or sixty feet, and the extraordinary part of the affair is that she does not appear to have been much hurt, and only complained that her heels were very sore. When questioned about the occurrence, she says she has no recollection of how she fell out of the window. Another case was that of a farmer of Longor, near Buxton, who was suffering from a severe attack of the malady. During the night he became delirious and escaped from the house,

and was smothered in a heap of manure before his wife could obtain assistance. The third case was that of the postmaster of Ravenstone, near Ashby-de-la-Zouche, who had become much depressed, and, showed symptoms of brain affection during an attack of influenza. His wife missed him early one morning and communicated with the police, who found his body, partially dressed, in a well. The occurrence of these cases should put medical men on their guard, especially where there is any tendency to melancholia or depression on the part of patients.—*Med. Press.*

CHANGES IN THE KIDNEY IN PHTHISIS.

The condition of the kidneys in phthisis has never been fully investigated. Several observers have described a fibroid condition. Becquerel and Rayher concluded that Bright's disease was very frequently associated with tubercular disease of the lungs. Peacock in 117 cases of kidney disease found 30.7 per cent. of phthisis. Frerichs found that out of 42 cases of Bright's disease 6 also suffered from phthisis. Bamberger stated that the disease was found in 15 per cent. of those suffering from kidney disease. In the *Centralblatt für Allgemeine Pathologie und Pathologische Anatomie,* Feb. 1st, 1891, Dr. C. von Kahlden publishes his results on the same subject. He is of opinion that slight degeneration of the renal epithelium is almost always found in active phthisis. It may, however, be so slightly marked that it is only visible on microscopic examination, and even then may be easily overlooked. The kidney may be either normal in size or somewhat enlarged. Microscopically the following conditions are noticed. The surface of the organ is smooth and yellowish in color; the capsule peels easily; the cortex is usally slightly thickened, and also yellow in color; the medullary portion is pale. The microscopic changes chiefly affect the cortex, the parenchyma being first attacked. The epithelial cells undergo fatty degeneration, but are occasionally replaced by fresh epithelial cells. The interstitial changes are therefore secondary, and generally slight, and take the form of a small round-celled infiltration, and some increase of the connective tissue. The glomeruli also take part in the degeneration. The cortex is not uniformly affected, but the changes take place in patches. These lesions are evidently chronic, as is shown by the thickened capsule, the atrophy of some of the glomeruli and the changes in shape of the epithelial cells of the tubules, these being altered from a club form to a cubicle or cylindrical shape. Clinical symptoms which accompany the renal degeneration are unreliable. Albumin in the urine is rarely present. The author states that the condition is one of chronic parenchymatous nephritis, and thinks that it may be caused by the poisonous products of the tubercle bacilli.—*Lancet.*

THE PRESYSTOLIC BRUIT.

Professor I. Cantalamessa, of Bologna (*Riforma Medica,* May 5th, 1891) says the presystolic *bruit,* which a Bolognese professor (Brugnoli) was one of the earliest to study (1859,) is still by some regarded as pathognomonic of mitral stenosis. Flint, however, reported three cases of aortic insufficiency, in each of which a presystolic *bruit* was distinctly heard as well as the diastolic, but in which the mitral valves were found intact after death. His explanation was that the chordæ tendineæ of the mitral valve vibrated owing to increased tension during the auricular contraction, because the ventricle received blood both from the aorta and from the auricle. Keit thought that the murmur was of aortic origin, due to the great difference of tension between the loaded ventricle and the empty aorta at the moment of beginning of systole. But if so, Cantalamessa maintains, the *bruit* should be heard over the base of the heart, not the apex. De Renzi gave as the cause, the meeting of the two currents of blood, one (abnormal) from the aorta, the other (normal) from the auricle. But this and Flint's hypothesis are, in Cantalamessa's opinion, open to the grave objection that if either were true, a presystolic *bruit* ought to be very common in aortic insufficiency, which it is not. Nor is it heard in cases of great insufficiency, but only in rare cases, and then strictly localized over the apex. This suggested to Grocco the following theory: The regurgitation varying in amount and direction according to the degree and seat of the aortic lesion, if only one semilunar valve fail to act, the current backward will be oblique, and if directed posteriorly will cause the anterior bicuspid valve to become tense, and vibrate against the stream coming from the auricle, the brief auricular systole aiding. Further, if the backward current does not strike against the valvular cusp, it will still impinge against the ventricular wall, and in certain cases be reflected against the auricular current. After reference to the views of Dickinson, Constantin Paul, and Fenwick and Overend, Cantalamessa

proceeds to examine why the first sound is strong in mitral stenosis, and weak or even absent in aortic regurgitation. The first sound is normally caused by, 1 the heart muscle, 2 the atrio-ventricular valves, 3 the arterial distension. Which of these three will explain by its alteration the phenomena just mentioned? Certainly not the first, for in mitral stenosis the left ventricle is not hypertrophied; nor the last factor, namely, arterial distension, because in the same disease the pulse is small. There remains valvular tension as the cause. The more suddenly the valves pass from extreme relaxation to great tension, the more readily will a sound be produced. Now in aortic insufficiency the refluent strain tends to make tense the valves gradually, so that in this final closure there is no abrupt change, and hence the first sound is weak or absent; but in mitral stenosis, owing to the negative pressure in the left ventricle, the valves are at one time extremely relaxed and then suddenly stretched, which causes a short and sharp first sound. As regards the presystolic *bruit*, Cantalamessa concludes that: 1 The *bruit* heard immediately before the first sound in mitral stenosis, in double mitral disease, and (occasionally) in aortic insufficiency, is really a presystolic *bruit;* 2 it is not pathognomonic of mitral stenosis; 3 its presence warrants the diagnosis of mitral stenosis only when a careful examination of other physical signs allows the exclusion of aortic insufficiency.—*Brit. Med. Jour.*

THE ANAL REFLEX.

Rossolimo says this reflex consists in a contraction of the anal sphincters in response to a stimulation of the skin and mucus membrane of the anus. It is invariably present in man in health. The branches of the inferior hæmorrhoidal, pudendal, and perineal nerves, on which this reflex depends, are connected with the third and fourth roots of the sacral plexus, which spring from nerve cells in the conus medullaris. This reflex can be obtained in the dog as well as in man, and Rossolimo cut the spinal cord across at different levels from above downwards; whenever the lumbar enlargement was cut across at the level of entry of the third sacral nerve, the anal reflex suddenly disappeared, from which it follows that the cells of the spinal cord which are connected with this reflex are situated in the third quarter of the lumbar enlargement, reckoning from above downwards. In another series of experiments the lumbar enlargement was exposed, and the sacral roots were cut one at a time. By this means it was proved that the anal reflex depended upon the integrity of the third and fourth sacral roots. This reflex, therefore, has its seat in the cord lower than any other reflexes. To obtain the anal reflex the patient may be either standing, the operator separating the glutei, or lying on his side with the legs drawn up. The skin and mucus membrane of the anus may be stimulated by stroking with a pin, a feather, a piece of paper, or some suitable object. The reflex is shown by a contraction of the sphincter ani externus, and if it is very strong there is a drawing in of the whole anus, and even sometimes a contraction of the glutei. In women the testing of this reflex may be conveniently combined with a gynæcological examination. The author has examined this reflex in a great many conditions, and he comes to the following conclusions: It is increased in some cases of neurasthenia, in cases of myelitis high up in the cord, and in conditions in which there is a general exaltation of sensations. It is lost in multiple, neuritis affecting the sacral plexus, in some cases of tabes, and in myelitis of the lower part of the cord, and in these cases there is generally also anæsthesia of the rectum, anus, and urethra. It remains normal in functional derangements of the bladder, the rectum, and the sexual apparatus.—*Boston Med. and Surg. Jour.*

AN AID TO PALPATION.

Chlapowski finds that for palpation of tumors of the abdomen an excellent method is to put the patient into a well-filled bath tub. The advantages gained are several: the reflex contraction of the abdominal walls is overcome; it is very easy to change the position of the body without exertion on the part of the patient; and the pain on pressure is diminished. The author has had especially good results in determining the nature of tumors in the region of the cæcum, and in mapping out infiltration due to old appendicitis. He has also been able to determine the nature of floating kidneys, splenic tumors and different new growths, where previously the contraction of the abdominal muscles had prevented satisfactory examination.—*Ex.*

GOUT, MELANCHOLIA AND HIGH ARTERIAL TENSION.

Dr. H. Willoughby Gardner records in the *Lancet* the following case: W. W.—, first

seen on March 3d, 1891, when suffering from a mild attack of acute gout in the left foot. He had had many previous attacks, and had been troubled with gouty dyspepsia. After two or three days the local manifestations disappeared; the patient considered himself to be well, and proposed to return to work at the beginning of the next week. On the morning of March 9th he was found to be suffering from acute melancholia, chiefly of a religious type. The day before (Sunday) he had attended three long religious services, and had taken no exercise. A note which he wrote to his sister contained accusations and mis-statements which were apparently due to delusions, and, in addition, threats of suicide. When seen in the evening he wore an expression of settled melancholy. When questioned, he confessed to wishing to commit suicide, but said he knew it to be wrong. On examining his radial pulse, it was found that the beat was very weak, the wave being easily stopped by the finger; the artery, however, remained full between the beats, though it could be easily flattened out by pressure. On listening over the cardiac area the first sound at the apex was found to be short and weak, while the second sound in the second right intercostal space was loud and of a peculiar ringing character. It was thus seen that he presented the condition of "virtual tension" so well described by Dr. Broadbent.

There was great peripheral resistance, and with it, signs that the left ventricle was flagging and becoming unequal to meet fully the increased work thrown upon it. The probable consequence was that the movement of blood in the brain was extremely sluggish, and hence its cortical cells were not receiving a due supply of oxygen for healthy action. A mercurial purge was at once given. A strong mustard plaster—pushed so as to cause a blister—was applied to the nape of the neck, and his feet were put into a hot bath of strong mustard and water. He states that the mustard plaster caused very great relief in less than half an hour. In the middle of the night he was seized with a slight attack of gout in the left foot. At once all depression completely disappeared. It was replaced, indeed, by a certain amount of irritability, but this in its turn wore away as the pain in the foot ceased. When seen on the evening of the 10th the patient was in excellent spirits, and said he felt perfectly well. The radial artery could no longer be felt between the beats, and the pulse wave seemed considerably stronger. On listening over the cardiac area nothing abnormal about the heart sounds could be detected. The accentuated ringing character of the second sound had completely disappeared—indeed, it was not so loud in the right second intercostal space as in the left,—while the first sound at the apex seemed in every respect normal. With a view as much as possible to prevent the recurrence of undue tension, or, it may be said, of gout, careful directions were given as to diet and rigimen, special attention being devoted to his mode of life on Sundays. These directions have, Dr. Gardner was told, been carried out. The patient has kept in excellent health since, and states that his spirits have been better than they had been for some years.

SURGERY.

THE TREATMENT OF VARICOSE VEINS.

Dr. William Taylor said the treatment he advocated was blistering. He had discovered its good effects accidentally when treating a case of gout by means of blisters, and had since tried it in many cases with considerable success, and found it especially useful in old people. He considered blistering to be "eminently restorative" in varicose veins. Dr. Taylor did not believe in elastic stockings, and considered operative treatment unscientific. He supposed that the coats of the veins participated in some way, which he could not explain, in the restored vitality set up by the action of the blisters. He found that the veins remained sound for several years, but were then apt to become distended again, and require the treatment to be renewed. Its great advantage was that it could be used in cases where palliative treatment was contraindicated, and that it always did good to the solid œdema so often associated with the varicose condition. The details of the treatment were as follows: 1. Remove the cause. 2. Obviate the tendency. 3. Elevate the limb for twenty-four hours. 4. Blister from the foot upwards, six inches daily, watching the kidneys and bladder. First paint the part with Rubini's tincture of camphor, then with blistering fluid, and lastly with collodion. The blisters must rise and serum be withdrawn to do good. 5. When whole limb is blistered, apply plaster to the whole length of the vein for two weeks. 6. Remove the plaster and see what is the result of the treatment. If the veins bulge, blister again, if they are all right apply

more plaster, and allow gentle exercise for a week. If at the end of that time the veins are still in good condition, no further treatment is needed.—*Med. Press.*

IODOPHENIN: A NEW ANTISEPTIC.

A. Scholvien has found (*Pharm. Zeit.*, No. 40) that when a cold-saturated solution of phenacetin, acidulated with hydrochloric acid, is treated with iodine, a gray precipitate forms which afterwards appears as a mass of crystalline needles. It forms, when dry, a chocolate-brown powder. When recrystallized from glacial acetic acid, it may be obtained in steel-blue crystals.

In preparing this substance on a large scale, it would be necessary to operate with very large quantities of liquid, if a mere aqueous solution of phenacetin were employed. This is avoided by dissolving the phenacetin in glacial acetic acid, and afterwards diluting with water.

The resulting product, called *iodophenin*, melts at 130° C., decomposing at the same time. It contains one portion of its iodine in a more intimate combination than the other. It is soluble in 20 parts of cold glacial acetic acid, more easily in the same liquid when hot, and is also soluble in alcohol. It is but slightly soluble in benzol and chloroform, and insoluble in water. If heated with water, it is decomposed.

Wittkowsky has found that this substance is a most efficient bactericide.—*Amer. Drug.*

ENTIRE EXCISION OF THE TONGUE.

In the issue of May 2, 1891 of the *British Medical Journal*, Walter Whitehead reports one hundred and four cases in which complete removal of the tongue was practised for carcinoma of this organ. The mortality in these cases from the operation was 19.21 per cent. The age of the patients ran from fifty-six to seventy years. The cases included those in which the disease was far advanced, as well as those less seriously affected. No attempt was made to select the cases for report.

The following short description of the technique is given:

1. The patient should be completely under the influence of the anæsthetic during the first stage of the operation, but afterwards only partial insensibility should be maintained.

2. The mouth should be securely gagged and kept fully open throughout the operation.

3. The head should be supported in such a position that, while the best light is secured, the blood tends to gravitate out of the mouth instead of backward into the pharynx.

4. A firm ligature should be pressed through the tip of the tongue for the purpose of traction.

5. The first step in the operation consists in dividing the reflection of the mucus membrane between the tongue and jaw and anterior pillars of the fauces.

6. Rapid separation of the anterior portion of the tongue from the floor of the mouth.

7. Securing, if possible, the lingual arteries, with Spencer Wells' forceps, prior to division.

8. Passing the ligature through the glosso-epiglottidean fold, before finally separating the tongue.

9. The application of a mercurial solution to the floor of the mouth, followed by painting the surface with an "iodoform styptic varnish."

He recommends early operation, chloroform for an anæsthetic, and the mouth to be kept very widely open. It is advised to have the patient sit up from the first, and to walk about should the weather be fine. Scissors are used in preference to other instruments.

The ultimate results have always been unsatisfactory, but the author believes that the operation frequently prolongs life, or, failing in this, renders the patient's last days more comfortable. One of the patients survived the operation fourteen years, although he was sixty-two when operated upon.

The latter part of the article is devoted to the predisposing causes of the disease (carcinoma) for which the operation was done.

MODERN RENAL SURGERY.

In No. 16 of the new series of the *Sammlung Klinische Vorträge*, Dr. A. Obalinski, of Cracow, deals, in the first place, with the subject of rupture of the kidney as an indication for nephrectomy (SUPPLEMENT, May 16th,) and next reports cases of suppurative paranephritis, of calculous pyonephritis, and of ureteral fistula. The author sums up his views regarding the treatment of severe inflammatory affections of the kidneys and their sequelæ in the following conclusions: 1. Suppurative inflammation of the kidney and surrounding structures indicates the operation of nephrectomy in order that free exit may be given to the purulent and other inflammatory excretions, and that the focus of the disease may be thoroughly cleansed, and fur-

ther extension of the suppuration to important parts, as, for example, the thoracic and abdominal cavities and the hip-joint, be thus prevented. In most cases the single lumbar incision, as was performed by Simon, will suffice, but when there has been extensive undermining of the peritoneum the formation of a large flap, as practised by Bardenheuer, is to be preferred, as such operation permits of ready access to all extensions of the main pus-containing cavity. 2. Ureteral fistula should always be treated by removal of the corresponding kidney, provided the surgeon can assure himself of the existence of a sound renal organ on the other side. Nephrectomy in such cases is indicated, not only on subjective grounds and when, for instance, the external flow of urine cannot be restrained by any apparatus and the patient is thus prevented from following his occupation and from enjoying a comfortable existence, but also on objective grounds, since, notwithstanding the utmost precautions, an old ureteral fistula may result in suppurative inflammation of the corresponding kidney and of the adjacent soft parts. 3. Nephrectomy performed under these last-mentioned conditions offers much less favorable prospects than in cases in which there is an absence of suppuration or of cicatricial adhesions. 4. There can be no doubt that, under equally favorable conditions, the transperitoneal method can be performed more rapidly and with greater ease than the extraperitoneal method of nephrectomy, and that the progress towards recovery is more speedy after the former operation. The transperitoneal method, however, is not applicable to every case, and should be reserved for those instances in which the mischief is confined within the capsule of the kidney, the extraperitoneal method being indicated when the suppurated process has involved the perirenal structures.—*Brit. Med. Jour.*

A PIECE OF GLASS IN THE LARYNX FOR TWENTY-ONE MONTHS.

A remarkable instance of the tolerance of foreign bodies exhibited occasionally by the larynx, is recorded by Dr. C. C. Richardson, of New York, who succeeded in removing the offending substance after it had remained in its position more than a year and nine months. The patient was a lady, who, while at lunch in October, 1888, was suddenly seized with a violent fit of coughing which continued for more than half an hour, and seemed to threaten immediate suffocation. Careful examination at this time failed to reveal the presence in the throat of anything to account for the paroxysm, and it was assumed that whatever body had excited it had been subsequently swallowed. The patient, however, was for a long time ill, and was constantly troubled with a cough, laryngeal irritation, and loss of voice, and after enduring this state of things for twenty-one months she came under the care of Dr. Ransom. Laryngoscopic examination then revealed the presence of a thin piece of glass suspended antero-posterially between the vocal cords, the body of the glass swinging free in the glottis; an explanation of the distressing symptoms so long experienced was thus afforded. After brushing the larynx with a four per cent. cocaine solution Dr. Ransom was able to remove the foreign body with the aid of the Schrötter forceps, and it was then found to be part of a wine glass, triangular in shape, and measuring along its three borders seven-eighths of an inch, one inch, and one and a quarter inches, respectfully. Immediate improvement in the voice and relief of irritation ensued on removal of the glass, and the larynx quickly regained its normal healthy condition.—*Med. Press.*

THE TREATMENT OF MALIGNANT NEOPLASMS BY ANILINE INJECTIONS.

Prof. Mosetig-Moorhof (*Wiener klin. Wochen.*, March 19, 1891, p. 224) presented two patients. One had a myeloid sarcoma of the chin; all visible traces of the new growth had disappeared. She had received in all fifty injections of methyl-violet solution, one to five hundred. About 120 grammes of the solution were used. The other case, a man, had had a cysto-sarcoma of the sternal region. It completely disappeared. The sarcomatous infiltration of the muscles has, through retrogressive metamorphoses, subsided, leaving a few nodes, the size of beans, which are regarded as the residue of the stroma, *i. e.*, connective tissue. This patient had received twenty-one injections, or sixty-three grammes. He reported the case of a woman, aged 47, with an epithelioma of the nose. She had been under treatment thirty-four days; had received nine injections, each of three grammes, and was considerably improved. Another case, male, aged 58, affected with carcinoma of the tongue; had had twenty-six grammes of the methyl-violet solution injected into the tongue and on the floor of the mouth. Marked improvement followed. Out of sixteen in-operable cases, two died, and fourteen have been improved. Any in-

crease or dissemination of the neoplasm following the injections has never been seen. The injection treatment is not suitable for very vascular tumors, and should not be employed for those which spring from an inaccessible base, or such as require the needle to pierce a large serous cavity in order to reach them. The solution used is one to five hundred methyl-violet, and should be filtered through asbestos which has previously been heated to a red heat. A three-gramme syringe, with needles of various lengths is employed, and three to six grammes are injected every second or third day, mostly from the periphery toward the center. In ulcerated neoplasms the needle should be introduced at a distance from the ulcer. Bad results from these parenchymatous injections have never occurred—at most, there has been a slight redness or œdema.

Discussion.—Prof. Billroth did not consider Mosetig's cases as complete cures. A new growth can only be counted cured when all specific tissue elements have ceased to exist and been harmlessly resolved, and the previously in filtrated tissues remain as simple scars. There are but two new-growth diseases which we can heal, viz., syphilitic, by means of mercury, etc., and malarial, by means of quinine, etc. Billroth says: "I have treated a large number of cases by Mosetig's method, and three I recall perfectly. They were large, non-ulcerated sarcomas. I can only say that all three were made worse. In the treatment of ulcerated carcinoma by methyl-violet paintings and injections, the results were also unsatisfactory. As regards the two cases given, the woman still has a tumor remaining. While it may be, as has been said, that it cannot contract any more, nevertheless it has not entirely disappeared, but has only been reduced in size. In reference to the other case, we only saw it as a softened, ulcerating mass, and cannot say whether it was tuberculous, syphilitic or sarcomatous. The result is good, but there still remains a thick, diffuse infiltration of the tissues, and before this has disappeared we cannot speak of a cure."

Prof. Mosetig, in reply, stated that the case alluded to was undoubtedly a sarcoma, and that even if his two cases were not regarded as cured, it could not be denied that their condition had been very much improved.

GYNÆCOLOGY.

THE RESULTS OF THE REMOVAL OF THE UTERINE APPENDAGES.

Dr. Keppler, at the Tenth International Medical Congress, gave the after history of eighteen cases, which he had followed up and carefully studied. In each of the patients the operation had been done for gross diseases of the sexual organs, such as pyosalpinx, salpingitis, oöphoritis, uterine myoma —and never for psychosis or neurosis. Both tubes and ovaries were always removed. The therapeutic effects were good, the patients in all cases being relieved of their symptoms.

The anatomico-physiological results were likewise uniformly good. In no case did a typical menstrual hæmorrhage occur after the operation. The countenances of the women remarkably changed, and the women became quieter and more beautiful (!). In all cases the conjugate diameter of the pelvis became shorter, this effect being more pronounced in the younger patients; the shortening amounted from two to three centimetres. The vagina became shorter and narrower, the mucosa thinner, smoother and paler. The cervix became shorter, the uterus smaller, the introitus vaginæ narrower. The breasts became smaller and the nipples paler. The tendency to become stouter which has been described by other operators was not observed in any case. The sexual instinct was always preserved. Three patients, virginal before operation, married later and lived in happy wedlock. The passions persisted, particularly when the operation was performed early on young persons. In myoma the results of the operation were good both as regards the hœmorrhage and the shrinking of the tumor.—*Boston Med. and Surg. Jour.*

THE TREATMENT OF RETROFLECTION.

Dr. Veit (*Festschrift d. Berlin. geburtshilf. Gesellschaft zum X internat. med. Kongress*, p. 59) notes that retroflexion of the uterus has become a surgical disease, and therefore, since all cases do not demand operation, precise indications for treatment must be laid down. Life is not endangered by this malformation; some retroflexions are readily cured by simple therapeutic measures; whilst, on the other hand, no operation can restore the uterus to position as long as it remains fixed. The most easy cases for permanent cure are those which occur before 30, whether in relation to the puerperium or from more obscure causes. For the results of abnormal labors and mismanaged puerperia are not the sole causes of retroflexion. That malformation is occasionally found in newborn children, and not rarely at puberty. Here cause and effect may be confounded, for the beginning of menstruation can

hardly go on so normally in a chlorotic girl with faulty position of the uterus as in a robust subject. In cases of retroflexion in young subjects the careful application of the pessary is sufficient treatment, and half the cases so treated will be permanently cured after wearing the instrument, frequently changed, for about a year. The operations are ventro-fixation, shortening of the round or utero-sacral ligaments, and Schücking's vaginal hysteropexy. The results are at the best faulty, for they cannot make the uterus move freely, at the same time that it lies in a good position, between other viscera, bladder, intestines, etc. As long as a retroflexion is movable, it requires but little treatment in a woman past the change of life. The pessary will act best when the uterus remains bulky and not atrophied. In virgins it is often best to dispense even with pessaries, and turning their attention to the condition of their genitals is most objectionable; the nervous system, if fortified by any means which divert the patient's attention from the local affection will allow the trifling discomfort of the retroflexton to be well tolerated. Massage is of questionable value; it may increase the patient's nervousness, which is worse than the displacement. When pessaries are used, they will best avail if any pre-existing endometritis or metritis be cured. Fresh retroflexions after child-bed are the most favorable for treatment. Ergot should first be administered, nor should the pessary be applied till the eighth or tenth week, and when the instrument is changed a smaller pessary should be applied. Cutting operations are only justifiable when pessaries cannot be borne and do no good. Retroflexion with fixation of the uterus may be left alone in a sterile subject; in a patient anxious to bear children and also suffering from the malformation the case is different. The operations above mentioned have not been so generally adopted as to allow of judgment on their justifiability. Schücking's vaginal hysterectomy, which binds the fundus down forwards behind the bladder, is bad on theoretical grounds. Freund and Frommel's shortening of the utero-sacral ligaments and forming of adhesions in Douglas' pouch is more in accordance with reason.—*Brit. Med. Jour.*

OBSTETRICS.

INFLUENCE OF SULPHATE OF QUININE UPON THE GRAVID UTERUS.

Dr. Bertrand, of Vracene, in summarizing a series of experiments, states that sulphate of quinine exerts no unfavorable action upon the pregnant uterus, and that he has never known it to be the cause of an abortion. He has, however, frequently observed that when labor has already set in the uterine contractions can be materially strengthened by exhibition of this drug. Indeed, in cases of premature birth where uterine douches and the introduction of bougies failed to produce active labor, quinine would frequently have the desired effect and hasten delivery. Bertrand also found the drug of signal service in the after-birth period of labor, especially when an atonic condition existed, as well as in post-partum hæmorrhages and sub-involution of the uterus during the lying-in period.

Bertrand gives the drug in single doses of one gramme, but under certain circumstances increases this to two or even three grammes. When the patient is unable to take the drug per os, Dr. Bertrand advises its use hypodermically or as an injection.—*Allgem. Medicinische Central-Zeitung.*

ELEVATION OF THE PELVIS AS A MEANS OF RELIEVING VOMITING OF PREGNANCY.

Sir James Grant, M. D., writes:

In 1877 I was called to attend a lady in her first pregnancy, about the third month of utero-gestation. I learned that for fully ten days she had been unable to take food, and with great difficulty retained even the smallest quantity of liquid nourishment. Almost every form of treatment had been tried without any apparent good result. As a last expedient, I decided to test the effect of elevation of the pelvis, which was accomplished by lowering the head and thorax, and placing several pillows under the sacrum. In a short time the change for the better was encouraging, and continuing the position at intervals for a few hours, in two days the marked improvement in the system was quite evident, and utero-gestation proceeded to the full term without any return of this abnormal condition.

Within the past month, two cases of severe vomiting in early pregnancy came under observation, in both of which I adopted the same treatment, with equally satisfactory results.

Guémot, referring to the rational treatment of vomiting during pregnancy, says that a morbid or abnormal state of the uterus, the nervous system, as the carrier of reflex action, and the stomach, are the prime factors in the malady. The idea of Smellie's,

that the complaint is "chiefly occasioned by fulness of the vessels of the uterus," certainly is most rational. The elevation of the pelvis gradually lessens the quantity and force of the blood in the uterine vessels, and thus reduces the quasi-irritability, or, as Dr. James Stewart of McGill terms it, "the instability of the nerve elements" in the uterine nervous system, the abnormal influence of which, prior to the change of the pelvic position, had been rapidly telegraphed to the spinal and gastric nervous centres.—*Exchange.*

THE VAGINAL OPERATION IN EXTRA-UTERINE PREGNANCY.

Dr. Christian Fenger, in the St. Louis *Med. and Surg. Journ.*, reaches the following conclusions:

1. In case where the fœtal cavity is still aseptic, the vaginal operation exposes the patient to danger of sepsis in the fœtal sac, which cannot be guarded against. Abdominal section gives far better means of protection against septic infection.

2. Hæmorrhage from the placenta cannot be controlled by the vaginal operation. By abdominal section, on the other hand, ligation of the internal spermatic and uterine arteries, as devised by Olshausen, can be accomplished as a means of checking hæmorrhage from the site of a removed placenta in the territory supplied by these vessels. Abdominal section further permits of ligature *en masse* of the bleeding portions when the placenta has been divided at the place of incision.

3. Delivery of the child at full term is usually difficult, and thus dangerous to the mother, by the vaginal operation, but easy by the abdominal operation.

4. If the fate of the child is to be considered, the vaginal operation must be abandoned and replaced by abdominal section.

5. When suppuration has set in in an extra-uterine pregnancy presenting low down in the small pelvis, and the placental circulation has ceased, the vaginal operation may be considered in comparison with the abdominal operation.

6. The vaginal operation is strongly indicated in old suppurating fœtal sacs, with disintegrated fœtus presenting in the vagina.

Final Remarks.—The vaginal operation is condemned by a number of modern authors, among whom may be mentioned Werth, Olshausen, Lawson Tait, Thornton, and others. At the Gynæcological Congress at Freiburg in June, 1889, Olshausen condemned the vaginal operation as well as drainage into the vagina after laparotomy in such cases.

As an advocate of the vaginal operation Landau stands isolated. He stated that he had performed thirteen vaginal operations and lost only one mother. As his cases have not been published in detail, this material is not available for consideration here, and can have no influence on the conclusions above stated.

PÆDIATRICS.

EXALGINE IN PÆDIATRICS.

Dr. Moncorvo, in the *Bulletin Géneral de Thérapeutique*, reports a series of cases illustrating the beneficial action of exalgine in various painful affections in children. Without exception the drug was always well tolerated. In not a single instance did it produce those unpleasant symptoms so frequently seen to follow its use in adults, such as apparent drunkenness, roaring in the ears, darkening of the face, etc. The remedy was given to the children in doses ranging from 5 to 30 centigrammes. As the drug does not taste badly, it was given in substance, or administered in a little wine.

In all cases the action of exalgine was far superior to that of antipyrin, as in medium doses it acted equally as well as five times the same quantity of antipyrin.

In one case of incipient chorea in a little girl, the choreic movements ceased entirely after five days' use of the drug; 20 centigrammes having been given daily. On the strength of his observations, Dr. Moncorvo strongly recommends the use of exalgine in pædiatrics.

PROGNOSIS IN DIABETES.

At the Congress für innere Medizin (*Deutsche med. Zeit.*, 40) Sandmeyer, of Marburg, made some observations on a case of diabetes in a child who died comatose two years after beginning to suffer from the disease. Although the urine presented only traces of albumen, it contained an unusual number of casts, mostly granular. Sandmeyer has noticed in a series of cases of diabetes before and during the coma the appearance of casts in the urine previously free from casts; the casts are very short, generally hyaline, but sometimes granular, and disappear as the symptoms of coma pass off. The amount of albumen in such urines

is very small. In the case reported hyaline and granular, casts were found in some tubes, and extensive fatty degeneration of the epithelium. Degenerative changes were also found in the spinal cord, involving the anterior third of the columns of Goll in the cervical enlargement, and to a slighter extent the middle third. The pancreas was quite normal.—*Brit. Med. Jour.*

MASSAGE IN PÆDIATRICS.

Massage is an art, and, like every other art, requires study and patient preparation for its successful practice. It is a powerful remedy too, and, like other agents of its class, as potent for evil as for good in unskilled hands. Therefore, to insure good results, a trained masseur is necessary, and she must act under the directions of the physician. Before entering upon the therapeutic application of massage proper, it will be well to revert to the process of simple rubbing. This is of much value as a general hygienic measure. Each day after the bath, the skin having been thoroughly dried by a soft, warm towel, the whole surface should be gently rubbed with the palm of the hand, the process occupying about five minutes. This increases the capillary circulation, encourages thorough reaction, aids nutrition, and adds vigor to the frame. Weakly children, especially, thrive under it. In older children, friction with a soft towel may be substituted for the hand-rubbing, but the change should not be made before the fifth or sixth year.

Massage may be employed with advantage in the following diseases of childhood :

(*a*) *Chronic gastro-intestinal catarrh.*—In this condition the skin is harsh and dry, the muscle-tone is faulty, general nutrition is impaired, and there is a determination of blood from the surface towards the mucus membrane. A warm bath is administered every evening just before bedtime, the patient remaining in the water for five minutes; then the surface is thoroughly dried, and half an ounce of olive oil is gently rubbed into the skin ; the child is then enveloped in a light blanket and put to bed. After a little time diaphoresis begins. So soon as the sweating is free, the skin is again dried and the night-dress put on in preparation for sleep. Next morning the child is subjected to twenty minutes massage.

(*b*) *Constipation.*—Manipulation is a very efficient remedy in habitual constipation. The best method is to follow the natural course of the fæces through the colon ; thus, beginning in the right iliac region, proceed upward to the right hypochondrium, cross over to the left hypochondrium, and then downward to the left iliac region. Five or ten minutes every morning, or every morning and evening in obstinate cases, constitutes the proper duration and frequency of the applications. The pressure must be gentle, as delicate tissues are being dealt with. In this condition the combination of massage with the inunction of warm olive oil or a weak ammonia liniment is more efficient than the dry method.

(*c*) *Colic.*—Two or three minutes effleurage may be resorted to, as the urgency of the symptoms require, with the most satisfactory effect. In this connection it must be remembered, also, that rubbing the feet, to increase the circulation there, is an important aid in relieving colic.

(*d*) *General debility and anæmia.*—These conditions are much benefited by short, frequently-repeated courses of massage. Manipulation improves the general condition, and strength is rapidly gained.

(*e*) *Infantile Paralysis.*—Here massage of the paralyzed muscles brings more blood into them, and maintains their nutrition until, in favorable cases, new cells in the cord take on the functions of those which have been destroyed. In recent cases the sittings should be of short duration and frequently repeated, five or ten minutes three to four times daily. As improvement advances, the frequency may be reduced, and in chronic cases twice a day will be sufficient at any time. Electricity is of great aid, but it should not be used until about three weeks after the onset of the paralysis, earlier application being attended by the risk of increasing spinal congestion.

(*f*) *Chorea.*—At the onset of the attack the patient is put to bed, given a good supply of good food, and allowed to rest for two days without massage. At the end of this time the regular treatment is initiated. The child, at seven years of age, for example, has at 5.30 a. m. half a pint of warm milk ; 7 a. m., half a pint of milk and three slices of bread and butter (each slice an ounce in weight) ; 9.45 a. m., a teaspoonful of Merck's dry malt in a little milk . 10 a. m., massage for fifteen minutes, followed by half a pint of warm milk ; 12.30 p. m., a teacupful of rice pudding, half a pint of milk, green vegetables and mashed potatoes ; 4.15 p. m., half a pint of warm milk, three slices of bread and butter, and a lightly-boiled egg ; 7 p. m., malt as before ; 7.30 p. m., massage for fifteen minutes, followed by half a pint of milk. At

the end of ten days or a fortnight, the bread and butter is increased to four slices at 7 a. m., and 4.15 p. m., a lean broiled chop is added to the mid-day meal, and an extra pint of milk is distributed over the twenty-four hours. It is a golden rule never to hurry these patients out of bed. While carrying out this plan, recovery is more rapid under the use of Fowler's solution, administered in daily increasing doses.

(*g*) Other nervous diseases in which massage is employed with success are pseudo-hypertrophic paralysis, facial paralysis, neurasthenia, spinal irritability occurring in girls about the approach of puberty, and that ill-defined and painful condition so often encountered in young subjects, known as "growing-pains."

(*h*) Pleuritic effusions (serous,) fibroid pleurisy, enlarged lymphatic glands, and stiffened rheumatic joints are all benefited by rubbing. In these special instances all the manipulations are generally combined with the use of embrocations, though the curative effect cannot be attributed to the latter alone. In conclusion, those cases in which the manipulation is followed by a sensation of comfort or refreshing sleep are most benefited by it. On the contrary, those, cases which are stimulated derive little benefit, and perhaps positive injury, from the process.—*Dr. Louis Starr—Ann. of Gynæ. and Pæd.*

HYGIENE.

TUBERCULAR INFECTION FROM MILK.

A great deal has been recently said by many prominent members of the profession, concerning the inutility of adapting extreme measures for the prevention of tuberculosis, some of whom have held that both tuberculus meat and milk may be partaken of with impunity and without harm to the consumer. The following case, which we quote from the *Allgem. Medicinischen Central-Zeiting,* will be of interest to optimistic members.

The case was recorded by Dr. Ollivier in a recent meeting of the Academie de Médicine of Paris. The patient was a young woman, twenty years of age, with acute meningitis. The girl was of a strong constitution, and had no constitutional trouble. She had been educated at a boarding school. Upon inquiry, it was learned that within the course of a few years, thirteen pupils in the same school had been infected with tuberculosis, and six had died. The milk supplied to the school was from cows kept on the place. Upon examination these animals were found to have tubercular ulcers on their udders, and after being slaughtered were found to be generally infected by the disease.

THE PRODUCTION OF MYOPIA IN SCHOOLS.

In a recent number of *Graefe's Archiv für Ophthalmologie,* Dr. Seggel makes a very important contribution to our knowledge of this subject, especially in reference to Stilling's theory, that the form of the orbit is a potent factor in producing myopia. From a considerable number of measurements made on living subjects, Stilling found that the height of the orbit was less in myopes than in non-myopes, and he advanced the theory that this formation of orbit was one of the chief factors in producing myopia, for it resulted from it that other things being equal, the reflected tendon of the superior oblique would exert more pressure on the globe than if the orbit were high. When, as is not infrequently the case, this tendon has an approximately transverse direction, the combined pressure of the two obliques upon the plane of the equator, exercised during the period of growth, tends to produce elongation of the antero-posterior diameter.

Considering the inaccuracy of measurements made on the living subject owing to the varying thickness of the soft parts, as well as the fact that even with a low orbit, harm would only result when the direction of the tendon was almost transverse, and bearing in mind the possible co-existence of other factors, we are entitled to demand very full statistical evidence before accepting this theory.

Dr. Seggel's paper, containing, as it does, records of the measurement of 1,900 orbits, the refraction having been estimated in each case, is valuable from a statistical point of view, and he has, moreover, paid considerable attention to the age and sex of his subjects, and to changes occurring in the course of years. We have only space to quote his main conclusions. He found that in children under 10 years of age there was a distinct association between myopia and a low orbit; but that the increase in the height of the orbit when myopia has once been produced is more rapid than in non-myopic subjects, consequently at the age of about 13 the orbit is no longer any lower than in emmetropia, while in adults the myopic orbit is the highest. Striking results were obtained by

measuring the changes that occurred in a few years in the refraction. He found that of those who had low orbits, 44.72 per cent. became myopic, while of the other only 22 per cent. became so. It must be admitted that these figures tend strongly to confirm Stilling's view, that a low orbit has some influence in producing myopia; but Seggel himself admits that there must be other contributory causes, and probably use of the eyes upon near objects under unfavorable conditions is the most potent of these.

In connection with this part of the subject, our readers will do well to refer to the admirably practical papers read by Mr. Priestly Smith and Mr. Richardson Cross at the meeting of the Association at Birmingham, which are reported, together with the discussion on the subject, in the *British Medical Journal*, vol. ii, 1890, p. 723. Both authors agree that the most active cause in the producing myopia is prolonged convergence, a view that is quite consistent with Stilling's theory, since there must in addition to the exciting cause be some predisposing conditions to account for the fact that all children do not suffer although the conditions may be the same.

As regards the prevention of myopia, we are no doubt in many respects much better off than we were a few years ago. Our school buildings are better lighted, the desks and seats are better arranged, the books are better printed, and most teachers have some knowledge of the ill-effects of neglecting these precautions. On the other hand, the actual amount of work that we demand from our school children has enormously increased, and becomes greater every year. A large amount of home study is thus rendered necessary, and it may well be doubted whether in this way, at any rate among the poor classes, the effect of the improved school hygiene may not be more than neutralized.

It would be a great gain if the children could be divided into classes more in accordance with their physical fitness for resisting the injurious effects of over-study, than with their capability of acquiring knowledge which, though it may satisfy an inspector, will be of much less use to them in after-life than a pair of healthy eyes and a sound constitution.—*Brit. Med. Jour.*

TOBACCO AND PHYSICAL HEALTH.

STATISTICS GATHERED FROM YALE STUDENTS BY DR. SEAVER.

Dr. J. W. Seaver, the College Physician and instructor in athletics at Yale, has made a comparative study of the users and non-users of tobacco in the present Senior Class for the past four years, and from his measurements he forms the following table:

Average increase in	*Users of Tobacco.*	*Non-users of Tobacco.*
Lung capacity, liters..... .. (Or an increase 66 per cent. greater for non-users.)	.15	.25
Inflated chest, meters..... (Or an increase 19 per cent. greater for non-users.)	.0304	.0364
Height, meters..... (Or an increase 20 per cent. greater for non-users.)	.0169	.0202
Weight, kilogrammes..... (Or an increase 25 per cent. greater for non-users.)	.4	.5

With regard to the possible effect on scholarships these statistics were given: Of those who received Junior appointments above dissertations, 95 per cent. have not used tobacco; of those above colloquies, 87½ per cent have not used tobacco; of all who received appointments, $84\frac{3}{10}$ per cent. have used tobacco; of the entire class, 70 per cent. have not used tobacco.

Dr. Steaver says that these figures accord with statistics that he has kept for the past eight years, the greatest percentage of gain always being on the side of those who do not use tobacco. The greatest variation in the two years' widest part has not been more than 4 per cent. Some of the students who are classed among the non-users do smoke, but not oftener than once a week or at such long intervals that the tobacco is apt to have little or no effect on them. Dr. Steaver states that the prominent athletes do not smoke or otherwise use tobacco as a rule, Calhoun being the only exception in college. All the candidates for the crew abstain from tobacco. —*New York Times.*

SEA SICKNESS.

Sea sickness is one of those minor miseries of existence for which there appears to be no cure. Many have been loudly trumpeted but none have really succeeded in susceptible persons. As a matter of fact very little serious study has been given to the subject; persons who do not suffer are apt to despise those who do, and persons who do suffer are too glad to forget their misery to be disposed to give any thought to its source. Professor Rosenbach, of Breslau, has recently published a small monograph, the outcome of observations and study of the phenomena of sea sickness extending over ten years. He gives his experiences in the form of thesis,

which he uses as the basis of his explanations and arguments as to the nature of the disease.

His arrangement of facts is as follows: 1. The malady commences as soon as the vessel pitches, that is rotates on its transverse axis. 2. The rolling, that is rotation on its long axis, is less severe, but the combination of the two is very unfavorable. 3. The phenomena appear more quickly and are more severe the further the patient is from the middle of the ship. Persons sleeping are attacked, also small children and animals. In small boats without sails very sensitive persons may be affected, when sails are used sickness is more likely to occur. 4. A moderate amount of food in the stomach and a small quantity of alcohol is more likely to act as a preventive than an empty stomach. 5. The horizontal position on the deck acts in some degree as a preventive. 6. Anxiety and apprehension precede sickness, a certain exhibition of energy and resolution may in short voyages and with slight vessel motion control the tendency to sickness. Soft winds (for example sirocco), strong odors, etc., are unfavorable. 7. There are two categories of the affection dependent on individual predisposition; in one the head, in the other the abdomen is principally affected. Cases where both are affected are common.

In regard to intensity: (*a*) Some women begin to feel uneasy from the beginning of the voyage, in perfectly smooth conditions of the surface; they are pale, and have no appetite. There is a certain dread also. It is questionable if they are cases of sea sickness. Perhaps they represent the purely psychical form. (*b*) In another variety there is a general irritation of the nervous system during the whole voyage. The digestive organs are unfavorably affected. (*c*) This series forms a transitional variety. Slight motions of the vessel affect sensitive persons and produce sickness with general loss of appetite, indisposition to move or speak, and painful sensations in the head or abdomen. These symptoms are a delicate re-agent to the disturbing action of the vessel.

As to the *theories* of the disease, they are arranged under three heads: 1 The psychical theory, (so named by the author) according to which all the symptoms are produced through the action of certain sensory organs upon the consciousness, giving rise to uncomfortable or unwonted sensations or disturbed equilibrium. 2. The theory of disturbed equilibrium, according to which the permanent disturbances of equilibrium act as painful irritations to the contents of the skull and of the abdomen, and are thus the causes of the phenomena. 3. The theory of the disturbance of the circulation, according to which the disturbances of equilibrium and the swinging motions of the body produce circulatory disturbances in certain parts.

As regards the psychical theory, the arguments generally adduced in its favor are: 1. That the sight of the pitching vessels and of the up and down motions of the vessel favor the occurrence of sickness. 2. That the abnormal effects do not occur with the eyes shut. 3. That sleepers generally escape. This conclusion the author rejects, for he states that energetic will and closure of the eyes do not quite succeed in warding off the attack.

The action of visual disturbances in inducing the sickness he considers very important, but only secondary as factors in the result. That the sufferer may be roused from sleep in a full paroxysm of the attack; that children at the breast and young children suffer, though less than adults; and that horses, who in their boxes do not see the movements, also suffer—these facts prove, the author states, that the external mechanical influences alone must be the cause of the sickness. These facts, on which the author seems to rely for his conclusions as to the secondary importance of visual disturbances, if in themselves correct, do not appear to demonstrate that visual disturbances were absent in the cases mentioned, and it is to be remarked that in a note the author speaks of closure of the eyes or avoidance of the sight of the mast and bulwarks of the ship as being of great assistance in preventing the attack.

The third theory—that of circulation-disturbances—the author rejects. The second theory is particularly developed, and the disturbing effects of various kinds of unwonted movement are described and analyzed. Thus, it is shown that backward travelling may produce illness, pains, even vomiting. The motion in swings, the effects of circular motion are next described. The effects of rapid upward or downward motion have been particularly experimented on by the author in the rapidly-moving American elevators. The author thinks that he has discovered a new and substantial explanation of the action of external movement impulse by the phenomena observed in rapid elevators. It is found that in ascending with the eyes closed, no noise being heard, there is experienced a peculiar feeling at the epigastrium which goes off during the rise, say, of four or five floors, but re-appears the moment

the elevator stops. The same thing occurs when the elevator moves downwards, the sensation being felt only at the outset and on the arrest of the motion. In the motion of the elevator there occurs a sudden movement and sudden arrest of the movement, and the effect of this in producing the epigastric disturbance is held to be analogous to the effect of the motion observed in the vessel at sea. This explanation furnishes a theory which the author accepts, because it covers the ground to the necessary extent. Further, the author is led to the conclusion that the complex symptoms of sea sickness are due to the molecular disturbances produced by rapid movements arising from sudden change of direction of the motion, whereby a severe intramolecular shaking and irritation primarily acting on the cells and the protoplasm of particular organs is produced.

The immediate transition from one movement to another movement in a different direction is assumed to be the cause of the disturbances experienced. Thus the painful sensations in sea sickness, in the act of swinging, in the oscillation liable to occur in rapid railway journeys, agree in this, that the peculiar symptoms of irritation, the distressing feeling at the epigastrium, the cold sweats, the general feeling of illness, and the headache, appear at the moment when the direction of the movement changes.

As regards the cure of sea sickness, the authors consider that the only real cure is "custom." He speaks favorably of certain medicines as being often operative for very short sea voyages—quinine, antipyrin, bromide salts, cocaine, morphine, chloral, and other anæsthetics. He speaks with approval of the advice of older writers that the horizontal position at mid-deck should be taken before the voyage begins, and that a bandage should be tightly placed over the liver, whereby the intensity of the motion is diminished, and a certain degree of fixation of the abdominal contents promoted.

Professor Rosenbach has made a most valuable and suggestive contribution towards the sulution of the much-vexed question as to the nature and cause of sea sickness; and, no doubt, his views will excite discussion calculated materially to advance our knowledge of the subject.—*Brit. Med. Jour.*

MEDICAL CHEMISTRY.

INCOMPATIBILITY OF IODIDE OF POTASSIUM AND CHLORATE OF POTASSIUM.

M. Sohet (*Bull. de la Soc. de Phar. de Bruxelles*) has lately studied the incompatibility and toxic properties of iodide of potassium and chlorate of potassium. He was asked to prepare a potion whose formula was as follows: Iodide of potassium, 4 gm.; chlorate of potassium, 6 gm.; syrup of narceine, 50 gm., and distilled water, 200 gm. The solution was clear at first, but in a few hours it became cloudy, then turned to a yellowish hue and ended by taking on a brown coloration. His conclusion was that the combination of the two salts gave rise to iodate of potash, a toxic salt, and decided that this preparation should never be dispensed. On reading up the subject he found that M. Melsens, a professor of chemistry in Brussels, had once sent a communication to the Academy of Medicine, in which he stated that a mixture of 40 to 60 cg. of iodide and chlorate of potassium was sufficiently powerful to kill animals.

CHATININE, AN ALKALOID OF VALERIAN ROOT.

M. Waliszewski, a pharmacist of Clichy, has isolated an alkaloid from valerian, and named it chatinine, in honor of M. Chatin, late director of the Ecolé de Pharmacie of Paris. To obtain it, he removes from valerian root, by distillation, its valerianic acid and volatile products. Then he exhausts the root by decoction in distilled water, and clears the liquid with acetate of lead. The lead is eliminated by sulphuric acid or sulphuretted hydrogen. The filtered liquor is evaporated to the consistency of a soft extract, which is treated by 90 per cent. alcohol. The filtrate is distilled and the residuum is taken up with distilled water; this product is distilled to the consistency of an extract, and treated with bicarbonate of soda and ether; the ether is washed with distilled water; the liquid is now evaporated, and the residuum, which is chatinine, is treated by an acid, preferably hydrochloric. As valerian root contains an ammoniacal salt, which remains with the chatinine during the above operations, the product must be treated with 95 per cent. alcohol, in which the chloride of ammonia remains insoluble. The chatinine salts have the general characters of the alkaloids, and, like them, are precipitated by picric acid, bichloride of platinum, Valser's reagent, tannin, Bouchard's reagent, etc.—*Union Phar.*, March 15th. *Répert. de Phar.*, April 10th.

NEWS AND MISCELLANY.

BELGIAN ACADEMY OF MEDICINE.

The Belgian Academy of Medicine will celebrate its jubilee next December.

MANUFACTURED COFFEE.

Manufactured coffee can be detected by throwing the beans on some ether. Artificial coffee sinks to the bottom.

SANTONOLACTONE.

Santonolactone has been recommended as a substitute name for santonin, in order to avoid its being confounded with strychnine.

THE POPULATION OF FRANCE.

According to the last census the population of France was 38,095,150, including foreigners, which shows an increase of 208,584 over that of 1886.

TO WHITEN THE TEETH.

As a perfectly harmless, yet effective, agent for whitening discolored teeth, it is recommended to employ hydrogen peroxide made into a paste with prepared chalk or cuttle bone.

TO ABORT A BOIL.

The ointment of nitrate of mercury is said to be an excellent application in the case of a commencing boil or felon, its early use in most cases sufficing to prevent the formation of the furuncle.

GOOD ON FITS.

"I don't exactly understand the case, madame, but I'll tell you what I can do."

"O, what can you do, doctor?"

"I can throw the young one into fits, and I'm lightning on fits!"

"AN OUNCE OF PREVENTION, &c."

A folded periodical, of about this journal's size placed under the coat in the small of the back is said to be a sure preventive of pneumonia. Now is the time to subscribe. Copies ready for mailing, ten cents.—*Ex.*

STATUE OF GROSS.

The Treasury Department at Washington has decided that a statue of the late Professor Samuel D. Gross which will be erected in Washington by the American Surgical Association, shall be admitted free of duty.—*Ex.*

POLISH CONGRESS OF MEDICINE.

A Polish Congress of Natural Science and Medicine has just been opened at Cracow. It consists of more than a thousand members, including several distinguished scientific men from Warsaw, St. Petersburg and Geneva.

A CANCER PARASITE.

Dr. Russell, Senior Pathologist of the Edinburgh Royal Infirmary, has at length secured a cancer parasite and traced its life history. He finds it to be a fungus of the yeast type. Dr. Russell says the discovery can not be definitely accepted until tested by others.

LIQUID OXYGEN.

Professor Olszewski, of Cracow, recently succeeded in producing 200 grammes of oxygen in a liquid state. The experiment was made in the presence of numerous members of the Polish Naturalists' Congress, and the explanations given as to the qualities of the new fluid are said to have made a profound sensation.

CAMPHOR A SOLVENT FOR IODOFORM.

Camphor increases the solubility of iodoform in alcohol and ether. While one hundred parts of alcohol ordinarily dissolve not more than one and one-fourth parts of iodoform, the same amount of a saturated solution of camphor is capable of taking up as much as ten parts.—*American Practitioner and News.*

LACKAWANNA CO. MEDICAL SOCIETY.

The August meeting of the Lackawanna County Medical Society will be held on the 11th inst. at the Hotel Elmhurst at Elmhurst, a summer resort not far from Scranton on the D. L. & W. R. R. There will be a paper by Dr. M. J. Williams on the Intestinal Diseases Incident to the Heated Term, followed by a discussion. Dinner will be served at six, the members returning to Scranton at 9.05 p. m. An enjoyable time is expected and a cordial invitation given to all medical gentlemen to attend.

THE TEN COMMANDMENTS OF ABDOMINAL SURGERY.

1. The arrest of hæmorrhage.
2. The avoidance of mechanical irritation.
3. The guarding against infection.
4. The proper apposition of the edges of the wound.
5. The provision of necessary drainage.
6. To apply gentle pressure to prevent exudation.
7. To give perfect physiological rest.
8. To secure the best possible position of the parts to promote comfort and healing.
9. To provide for hygienic surroundings.
10. To attend to the patient's general health.—*Dr. Griffiths, So. Pract.*

THE CHOLERA AT KURNOOL.

It is curious as well as instructive, says the *Lancet*, to compare the number of cases and number of deaths in the town and district of Kurnool. In the town there were 140 people attacked, 57 per cent. of which ended fatally. In one place in the district there were 150 cases, and only forty-seven deaths—*i. e.*, 30 per cent. The explanation of this difference, people say, is to be found in the fact that while in Kurnool the natives would not, as a rule, take English medicines, in the district they were only too anxious to do so. This is the opposite of what most people would have expected, as townspeople are supposed to be better educated than the villagers.

THE HYGIENIC INSTITUTE OF BERLIN.

Since the retirement of Prof. Koch a year ago, this institution has been under the directorship of Dr. Erwin V. Esmarch, son of the Kiel Professor of Surgery. The appointment was, however, only a provisional one, and steps have been taken for a permanent appointment. A selection has at last been made in the person of Prof. Max. Rubner, of Marburg.who was brought up in the school of Karl Voit, of Munich. Prof. Rubner's career hitherto gives promise that he will not be an unworthy successor of the world-wide celebrity he follows. The new professor is 37 years of age, became Docent in Munich 1882, Professor Extraordinary in Marburg 1885, and Professor in Ordinary 1887.

MEDICO-CHIRURGICAL COLLEGE.

The following changes have been made in the Faculty:

Dr. G. E. Stubbs, Emeritus Prof. of Clinical Surgery.

Dr. W. S. Stewart, Emeritus Prof. of Obstetrics and Clinical Diseases of Women.

Dr. H. E. Goodman, Honorary Prof. of Surgery, Clinical Surgery and Orthopædics.

Dr. J. M. Anders, Prof. of Principles and Practice of Medicine, Clinical Medicine and Hygiene.

Dr. E. E. Montgomery, Prof. of Obstetrics and Gynæcology.

Dr. Ernest Laplace, Prof. of Surgery, Pathology and Clinical Surgery.

Dr. W. F. Waugh, Prof. of Clinical Medicine.

PHILADELPHIA'S POLYCLINIC.

ANOTHER IMPORTANT CHAIR FILLED BY THE BOARD OF TRUSTEES.

The Board of Trustees of the Philadelphia Polyclinic and College for Graduates in Medicine have created a third Chair of Diseases of the Eye, and, upon the unanimous nomination of the Faculty, have elected Prof. George de Schweinitz, M. D., to fill the position.

Dr. de Schweinitz is a graduate of the Medical Department of the University of Pennsylvania, class of 1881, and is at present Ophthalmic Surgeon to the Children's Hospital, Ophthalmologist to the Philadelphia Hospital and to the Orthopædic Hospital and Infirmary for Nervous Diseases, and Lecturer on Medical Ophthalmology in the University of Pennsylvania. He will be associated in his new field with Professors Edward Jackson, M. D., and S. D. Risley, M. D.

The new college announcement shows the teaching staff of this institution to be composed of emeritus professors, 4; professors 24; adjunct professors, 6; instructors, 6; lecturers, 4; clinical assistants, 23. Total, 67. The collegiate department is gradually acquiring apparatus for an elaborate teaching outfit, and that of the department of diseases of the mind and nervous system is at present unequalled, and the same may now be said of the eye department.

The Polyclinic Medical Society is accumulating an endowment fund for the establishment and maintenance of laboratories and the medical library, the nucleus of which has been placed in the hands of the Board of Trustees.—*Ledger.*

INTERNATIONAL CONGRESS OF THE RED CROSS.

The Red Cross Associations organized in

the European States which have signed the Geneva Convention have had the laudable custom of holding international meetings, at which the interests of the sick and wounded in war are practically considered, and the arrangements for a more effective and harmonious furtherance of those interests discussed and agreed upon. The first of these congresses was held in Paris in 1867, the second at Berlin in 1869, the third (*longo intervallo*) at Geneva in 1883, and the fourth at Carlsruhe in 1887. At this latter it was resolved that in future the congresses should meet every five years, the *locus in quo* of the succeeding congress being then undecided. The International Committee of Geneva has just proposed that the congress should hold its fifth meeting in Italy next year, and the Central Italian Committee, duly notified of the fact, has completed negotiations with the Government, according to which the seat of congress will be Rome, and April or May, 1892, the month in which it will assemble. Conformably with this arrangement, the President of the Italian Red Cross Association has already, in accord with the Geneva International Committee, sent off circulars to the central committees of the Red Cross Associations throughout Europe, inviting their presence and coöperation at Rome in April or May, 1892, the precise date to be subsequently fixed. In the invitations are also included the representatives of branch associations, so as to leave out no element which may conduce to the success of the Congress and of the important interests it has undertaken to promote.

NEW HOSPITAL AND CLINIC AT NEWPORT, VERMONT.

The village of Newport, Vt., is situated on the west side of a narrow neck of Lake Memphremagog, containing about three thousand inhabitants. West Derby is situated on the opposite side and contains nearly twenty-five hundred inhabitants. The locality seems to be a natural centre for all kinds of business and trade for many miles around. The physicians of both villages conceived the idea that the establishment of a Hospital and organization of a clinic would be a useful thing to do; that it would centralize practice, and be the means of retaining surgical cases at home for treatment, that now go away to Boston, Montreal, or Burlington, and thereby be the means of establishing a better reputation of the physicians at home.

On Wednesday, June 17th, the physicians of both villages met at the office of Dr. J. C. Rutherford, and organized a clinic, to be known as Memphremagog Hospital Clinic. Dr. J. C. Rutherford, of Newport, was chosen president, and Dr. C. V. Bogue, of West Derby, secretary. Clinics for the treatment of patients and for surgical operations were established on every Thursday afternoon at one o'clock. Each member of the clinic is required to be on duty as attending physician four weeks in succession, taking his turn alphabetically.

Patients are received at the Newport House, where the clinic is held, until a hospital building shall be furnished.

Dr. Bogue has recently operated successfully in one case of ovarion tumor. The case need not be reported in full; I will relate only some unusual features. The patient was 37 years of age; never had children; the tumor had been developing eleven years. When cut down upon it was found to have no adhesions. The patient made a good recovery notwithstanding she discharged large quantities of pus and blood in her urine during convalescence. Previous to the operation the urine contained albumin. The tumor was unilocular and weighed 13 pounds.

DIET AND ANIMAL TEMPERATURE.

A question has been put to us by a correspondent—Mr. Walter Fenton—whether the animal temperature of persons who subsist on a vegetable diet is lower than that in animal or mixed feeders. The inquiry has never been investigated in the human species on a sufficiently comprehensive scale to be of any value, but such comparative facts as throw light on the matter tend to indicate that vegetable feeders, amongst the lower creation, have a high temperature. Dr. John Davy, brother of Sir Humphry, and one of our keenest physiological observers of a past day, was amongst the first to make comparative observations of the temperature of different animals in their normal state; and to a certain extent John Hunter, Pallas, Despretz, and Samuel Metcalfe carried out the same research. In 1869 Dr. B. W. Richardson, in one of his lectures on Experimental and Practical Medicine, classified the results of most of these previous authors, and tested them by a new series of direct observations. His table of mean results showed that vegetable feeders have a high temperature. The sheep gave a temperature of 104°; the goat of 104°; the pigeon of 108°; and the com-

mon fowl 108°. The rabbit showed 103°, whilst the dog and the cat, animal or mixed feeders, showed 102°. But some herbivora were comparatively low; the ox, for example, 101, and the horse 100°. The differences here stated were supposed by the last-named observer to depend on the cutaneous covering of the animal more than on any other cause. In the case of the pigeon, on which this author made ninety-four observations, the high temperature was attributed to the non-conducting character of the feathers, a marvellous protection to a swift-flying animal in a cold atmosphere. In man, from 100 observations, he came to the conclusion that in a strictly natural state 98° F. was the truest standard. These researches are useful as comparative studies; still, it is an open question whether in man, or in any species of animal that can live on a mixed diet, there is a variation of temperature, according to mode of diet; and it would be a good work to inquire on a large scale if, under a purely vegetable form of dietary, the temperature in man is reduced. Our correspondent informs us that in him (a healthy man) and in his wife (a healthy woman), both in the prime of life, the temperature now ranges from 96° to 97.4° F. He for three years and a half, and she for two years and a half, have been total abstainers from alcohol, and have subsisted on fruit and vegetables, with addition of "butter, cheese, milk, eggs, and a little fish." Previously to adopting this system his temperature had never fallen under 98° "in so far as he remembers," and he therefore is inclined to the view that under his new regime he lives as healthily as before, at a lower expenditure of energy. If such prove to be correct, and if it should be demonstrated that a minimum animal diet (for our correspondent, be it observed, is not strictly a vegetarian) will support life efficiently under reduced combustion and reduced waste of material, a valuable as well as curious fact will be added to our practical knowledge. Evidently there is here open a fine field for a patient, perfectly unbiased, and truthful investigator.—*Lancet.*

THE PNEUMOGASTRIC NERVE.

Upon an average, twice a week,
When anguish clouds my brow,
My good physician friend I seek
To know "what ails me now,"
He taps me on the back and chest
And scans my tongue for bile,
And lays an ear against my breast
And listens there awhile.
Then is he ready to admit
That all he can observe
Is something wrong inside, to wit:
My pneumogastric nerve!

Now, when these Latin names within
Dyspeptic hulks like mine
Go wrong, a fellow should begin
To draw what's called the line.
It seems, however, that this same,
Which in my hulk abounds,
Is not, despite its awful name,
So fatal as it sounds.
Yet, of all torments known to me.
I'll say without reserve
There is no torment like to thee,
Thou pneumogastric nerve!

This subtle, envious nerve appears
To be a patient foe—
It waited nearly forty years
Its chance to lay me low;
Then like some blithering blast of hell,
It struck this guileless bard.
And in that evil hour I fell
Prodigious far and hard.
Alas! those things I dearly love—
Pies, puddings and preserves—
Are sure to rouse the vengeance of
All pneumogastric nerves!

Oh, that I could remodel man!
I'd end these cruel pains
By hitting on a different plan
From that which now obtains.
The stomach, greatly amplified,
Anon should occupy
The all of that domain inside
Where heart and lungs now lie.
But, first of all, I should depose
That diabolic curve
And author of my thousand woes,
The pneumogastric nerve!

—*Exchange.*

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Clinical Lecture.

ON CERTAIN SEXUAL NEUROSES.

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ANATOMY AND PHYSIOLOGY.

The instinct of self-protection, the instinct of hunger, the instinct of re-production, these are the primary and compelling forces of animal life. Of these, the instinct of reproduction, as shown in the sexual function, is the most intermittent and shortest in duration, yet most intense in its activity, while it lasts.

The sexual function develops at the age of from 9 to 15 years, according to race or climate. In man it continues almost throughout life-time, sometimes even receiving a new impulse in old age.

The anatomical basis of the sexual function consists of a brain-centre, a spinal-centre, peripheral nerves and the sexual organs.

The *brain-centre* has not been exactly localized. Erection can be produced in dogs by irritating the cortex. Sexual feeling in many lower animals is closely associated with the sense of smell, and it is possible that the centre of sexual sensations in some domestic animals is in or near the limbic lobe, a lobe which lies on the median surface of the cerebral hemispheres, and identical in part with the gyrus fornicatus.

In savage and semi-civilized man sexual feelings were much more closely associated with olefaction than is the case in modern civilized society. In persons with degenerate brains or depraved instincts, gross illustrations of the relation of odor and sexual feeling are still seen. Krafft-Ebing cites the case of a man in whom erections were caused by the odor of flowers. Cardinal Richelieu is said to have been in the habit of stimulating voluptuous feelings by sitting in a richly perfumed room. Ordinarily, however, perfumes have but a remote sexual suggestion. This feeling is much more closely associated with visual images; more rarely by music, certain kinds of which produce voluptuous sensations. I have heard a patient confess that going to a certain Wagnerian opera caused feelings almost amounting to an orgasm. There is no definite cerebral "centre" for sexual feelings, however. They are most likely associated chiefly with the activity of the occipital and limbic lobes.

The cerebral centres are those in which arise voluptuous feelings and sexual desires. They also act upon the lower centres stimulating or inhibiting their activity. They have, therefore, a psychical and a mechanical side.

The *spinal centre* is situated in the lower part of the spinal cord and has the purely mechanical function that of controlling erection and ejaculation.

The *peripheral nerves* are the efferent or nervi-erigentes which are vaso-motor and motor, and the afferent which are partly nerves of cutaneous sensation and partly excito-reflex.

Erection—This is done by the afferent nerves to the blood vessels, which arise from the 1st to 3d sacral roots. Also by motor nerves to ischio-cavernous, bulbo-cavernous and part of transversus perinei muscles, arising from 3d to 4th sacral roots.

Ejaculation—This is done by efferent nerves to bulbo-cavernous muscles, arising from the 3d and 4th sacral roots.

The afferent sensory and excito-reflex nerves are the cutaneous nerves of the penis, running in the pudic nerve and arising from the 3d, 4th and 5th sacral roots.

The *genital centre* in the spinal cord extends from the 1st to the 4th sacral nerves, the erection centre being higher than the ejaculation centre.

Delivered at the Post-Graduate Medical School of New York.

The bladder and rectal centres overlap the genital, but are slightly lower than it, the bladder centre being the lowest.

The function of the peripheral organ in the male is to accomplish erection and ejaculation. The first is done partly by a relaxation of the muscular fibres of the corpora cavernosa and arterioles allowing the blood to flow in, and partly by the contraction of the bulbo-cavernous and ischio-cavernous, and deep part of transverse perineal muscles which constrict the root of the penis. The ejaculation of semen is the result of spasmodic contraction of the bulbo-cavernous muscle.

The sexual mechanism is closely connected with the vaso-motor nerves, so that the vaso-motor centre in the medulla may be looked upon as part of it. By irritating this as with asphyxiated blood or muscarin, erections may be caused.

The spinal centre is dominated by that in the brain. By an effort of the will voluptuous thoughts are inhibited or encouraged and the spinal centre correspondingly affected. Man alone possesses this inhibitory power and is distinguished from the brutes thereby. The spinal centre may be active when cut off entirely from the brain. Thus, in a case of total transverse destruction of the cord at the 12th dorsal vertebra operated upon here by Prof. Abbe, the patient had full erections and emissions, though entirely unconscious of them. The spinal centre developes earliest and erections may occur at the age of three or four years, while the cerebral centre and sexual feelings do not normally develop till the time of puberty. The cerebral centre, though developed late, often outlasts the spinal; and we see senile voluptuaries, spinally impotent yet indulging in all kinds of erotic excitements. These old men experience a sexual excitement which is purely cerebral.

We will turn now to the study of some of the disorders of the sexual functions. I wish first to show you on this chart the classification which is to guide us in our study.

You will understand that all those disorders which relate to cerebral centre so far as it is concerned with the sexual feelings and desires are called *psychoses*. Those disorders which are concerned with the lower centres and peripheral nerves, as well as with the more mechanical side of the cerebral centre are called *neuroses*. The distinction can not always be sharply drawn, but it is a convenient one.

CLASSIFICATION OF FUNCTIONAL SEXUAL DISORDERS.

The Sexual Psychoses are Divided into,

A—The Vicious Habits, such as masturbation, &c.

B—The Sexual Perversions, these are classed as

1. Masturbation, sexual murder and anthropophagy.
2. Flaggellation.
3. Exhibitionists.
4. Stercophily.
5. Contrary Sexual Instincts of which Pæderasty and Bestiality are examples.

C—Excessive Sexuality:—

1. Sexual precocity.
2. Senile sexuality.
3. Satyriasis.
4. Nymphomania.

Of the *sexual perversions* I shall say nothing except that they are happily as rare as they are disgusting, and are usually an evidence of mental deterioration. They are sometimes, however, acquired vices being the result of a continual search for new sexual stimuli on the part of voluptuaries.

Historians have asserted that several of the Cæsars were members of this latter class, so also was Louis XI and probably a good many other representatives of royalty in earlier days.

The Sexual Neuroses Are:

A—The Sensory Neuroses:
- Neuralgias.
- Parasthesias.
- Anæsthesias.
- Psychical Anæsthesia, (Loss of sexual desire).

B—The Motor Neuroses:
- Spasmodic—Nocturnal Pollutions.
- Paralytic—Spermatorrhœa.

C—The Secretory Neuroses:
- Polyspermia.
- Aspermia or Azoospermia, (Sterility).
- Prostatorrhœa.

D—Mixed Neuroses:
1. Impotence—viz:
   - *a.* From organic defects and diseases.
   - *b.* Psychical form.
   - *c.* Neurasthenic form.
   - *d.* Congenital defects.

Of the numerous and distressing array of maladies in the list here shown, the neurologist deals with but few, and these are:

Neuralgias.

Pollutions and Spermatorrhœa.

Impotence.

Masturbation and its various psychical results.

I propose to speak to you to-day only of the sexual psychosis, or vicious habit of masturbation and its most frequent consequence, seminal pollutions.

MASTURBATION AND POLLUTIONS.

Masturbation is the name given to the vicious habit of artificially exciting the sexual orgasm.

It is a very common vice in boys and less common but present in girls, and in adult men and women.

It is usually only a vice due originally to low associations and teachings among children. In some cases it is a disease or rather the symptom of a neurotic or insane constitution.

Ætiology—It is most common between the ages of 14 and 18, but may begin earlier. Even infants and very young children sometimes masturbate usually as the result of some local irritation which leads them to rub the genitals. Thus for example a tight prepuce, eczema or worms may lead to the practice; but it is usually taught by a companion. The practice sometimes attacks schools almost like an epidemic, for in every institution a certain per cent. of the boys are sexually precocious or vicious while the others are ignorant and innocent of the evils of the practice. Masturbation is relatively rare after twenty but is practiced throughout life even unto old age by some.

Results: Masturbation as ordinarily practiced leads after a time to a feeling of malaise, mental depression, disinclination to work, or study or enjoy one's self as before. The appetite is a little impaired, the extremities easily get cold, and perspire readily. Peculiar numb feelings are felt in the hands and feet. There is an unnatural nervousness and irritability, and the power of concentrating the mind is a little weakened. The patients often have dilated pupils and hyperæsthetic skin. After a time nocturnal emissions occur. The organs become irritable and slight excitement causes erections. These symptoms may be slightly marked and pass away in a day or two, or until another indulgence occurs.

Masturbation is sometimes done to an extraordinary extent, even daily or twice daily for a considerable time.

After a while the young man begins to find that he is not well, and realizes that this habit is hurting him. Then if he be sensible and of healthy constitution he stops. Others are frightened out of it by friends or by reading the terrorizing stories printed in quack advertisements and circulars. Sometimes the fright thus caused leads the unhappy youth into a condition of hypochondriasis, which is helped on by the occurrence of nocturnal pollutions and the nervous debility resulting from his past indiscretions. In other cases in which there is a decided neurotic history, a genuine neurosis which is called sexual neurasthenia develops and annoys the patient for years.

Masturbation rarely leads to insanity and is oftener a symptom than a cause of such disorder.

It is occasionally the cause of epilepsy. When this is the case the convulsive attacks are likely to put on a peculiar hysteroid phase, they are accompanied with peculiar co-ordinated convulsions and emotional disturbance.

Case I. The patient whom I have just shown you illustrates a very common phase of the trouble. He is a boy of sixteen, who belongs to a somewhat neurotic family. He has been carefully brought up, and has had no nervous disorders. Two years ago he learned the habit of self-abuse, and has since practiced it weekly and sometimes daily. A few months ago his parents noticed that he was more irritable, lost interest in his studies, looked pale, slept badly, and became somewhat thinner. Inquiry revealed the source of the trouble, and also that he was having one or two nocturnal emissions weekly. The boy was badly frightened about himself. He was placed on bromides, taken from school, and kept at work out doors. But his emissions continued. I saw him a month ago, and prescribed atropia and bromides, twice a day, noon and night, with a drachm of fluid extract of salix nigra at night. Besides this, cold steel sounds were introduced into the urethra for ten minutes, three times weekly. He was made to take cold sponge baths daily, and was given an impressive lecture on the necessity of stopping his bad habits. He is very much better now, and on the high road to recovery.

AUTOMATIC MASTURBATION.

In some cases masturbation is done automatically in the sleep, and then very stringent measures are needed to overcome the practice.

Case II. A boy aged fourteen, of a very neurotic family, had suffered for over two years from chronic chorea and incontinence

of urine. The bladder would empty itself in the day time as well as at night, so that he had to wear napkins constantly. I suspected masturbation, and it was confessed to me. The practice was stopped. The enuresis during the daytime then ceased also, but it continued at night, and was not in the least controlled by belladonna, ergot, bromides, rhus or other remedies. A brother who slept with him told me that the boy made peculiar convulsive movements of the legs during sleep, and I suspected involuntary masturbation. I contrived a splint by which his legs were kept apart and immovable. He wore it and his enuresis ceased. His chorea also gradually disappeared.

Case III. A still more obstinate case was that of a single man, aged 28, who suffered from the neurasthenia of adolescence, and who had nocturnal pollutions. He would awake and find himself in the act of masturbating, and there was no doubt that the pollutions were the result of this involuntary process. He made a number of ingenious attempts to stop it. He tied his hands behind him; but worked himself loose in his sleep. He then tied his hands to the bed posts above his head. This answered for a time, but again he succeeded in untying the knots and getting free.

Finally I put him in the masturbation drawers, devised by my colleague, Prof. Graeme M. Hammond. These consist of strong canvas drawers, fastened about the waist with steel bands, the side of which are padlocked. The patient locked himself in the drawers every night, hid the key, and his pollutions ceased.

Prognosis. The habit never causes serious disease in persons of originally healthy nervous stock. In neurotic persons it leads in some cases to sexual hypochondriasis and neurasthenia with nocturnal pollutions, and this is its commonest evil result.

Much more rarely it excites epilepsy and insanity. The old views that masturbation is a frequent cause of insanity are not now entertained.

The extraordinary impunity with which some persons masturbate, is illustrated by the patient whom I have shown the class recently as a case of sexual neurasthenia.

Case IV. The man is a peddler, married, and forty years old. He began masturbating at the age of sixteen, and has continued almost daily ever since, *i. e.* for twenty-five years. Even marriage did not cause him to desist, for he experiences greater pleasure in self-abuse than in natural indulgences. The result is less than might be expected for he is alive and sane, which is indeed surprising. But he suffers now from, sexual weakness, neurasthenia, dyspepsia, and a long train of subjective symptoms. The fact that he has masturbated so much and preferred it to sexual indulgence, is evidence of a congenital perversion of the sexual function. For though we can not explain the reason, it is certain that in normal individuals, masturbation is a depressing, and more or less injurious act, while the normal sexual act is not.

Diagnosis. Many victims of the masturbation habit, who have come to recognize its evils and tried to stop it, develop as I have said a hypochondriacal condition, and feel sure that there is something in their faces, which reveals to the world their trouble. This is not the case. But there is a certain physiognomy, which in a measure, characterizes the masturbator to such an extent that an experienced observer can detect it. The pale, pasty complexion, moist furtive eye, dilated pupil, listless, restless, and depressed manner, the wet flabby palms, hyperæsthetic skin, all help to tell the story. Locally the penis is often reddened and more or less turgid, the scrotum relaxed, and a variocele may be present.

Examination of the urine may reveal spermatozoa. The urine also is almost always of rather low specific gravity, and contains a great excess of phosphates, both earthy and alkaline.

The Treatment: Moral, Hygienic, Local and Medicinal.

The patient must be told plainly the necessity of stopping the practice. He must be impressed, but not terrorized. He should be kept out of doors at vigorous physical exercise; for sedentary and solitary work is always bad for such cases. He should be made to take cold water baths. He should sleep on a hard bed with light covering, and he had better sleep with some one whose presence may exercise a controlling influence. He should not eat heartily at night, never just before going to bed and what is still more important he should not drink before going to bed. Sometimes it is well to have him wakened at an early hour in the morning, when he should empty his bladder. For emissions occur often early in the morning and are promoted by the irritation of a full bladder.

Locally cold steel sounds may be introduced, and allowed to remain for ten minutes, three or more times a week. Or

the psychophor or Ultzman's short catheter may be used. In bad cases with a great deal of prostatic irritation, local applications of nitrate of silver are needed. Internally, a mixture of Tinct. opii Mv, Tr. camph. Mx, and Tinct. lupulin. Mxxx, may be given at night, the ingredients being somewhat varied in amount to suit the case. I once gave this mixture to a sailor, who like most sailors masturbated and suffered from pollutions. It cured him, and he gave some to the captain who prescribed it to the mates, and before the voyage was over, the whole crew were rejoicing in the efficacy of the combination.

Bromides, chloral, atropia, and salix nigra are also drugs which are often useful.

The mechanical measures which have been devised for preventing erections, such as rings with sharp teeth, are rarely needed and rarely useful. They may even do harm by directing the mind to the affected function.

I do not believe it right for the physician to prescribe fornication. It is not safe nor curative, apart from the moral aspect of the matter.

It has always struck me also as pretty small business for a man to purposely select a wife to relieve him of the results of a weak will and vicious sensual indulgence. If marriage comes in the natural course of events as it often does, so much the better. But to select a wife as a remedial agent for masturbation is unjust to the woman and a confession of moral and mental feebleness.

Man is distinguished from the brute by his self-control. Let him bear this fact in mind and raise himself above the animals by a determined effort of the will. Pure thoughts, and chaste associations, vigorous physical exercise and a resolute effort to act a manly part will always be successful.

COMMUNICATIONS.

A FEW NOTES, DIDACTIC AND CLINICAL ON OSTEO-GENESIS AND OSTEO-PLASTY. *

BY THOMAS H. MANLEY, M. D.,

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Modern research and experimentation with the application of facilities which recent discoveries have placed in our hands, have given an immense impetus to the study and utilization of surgical osteogenesis.

This term, in this instance, is restricted to that process, inherent, in healthy bone and its investments, which is called into action, in that class of cases, in which, through surgical intervention the osseous structures are directly dealt with.

Anæsthetics have made it possible to now successfully encompass manipulation of bone substance, which always entails considerable consumption of time. Hæmorrhage may be easily controlled and the operating field efficiently cleared of accumulations of blood and coagula, which obscure the normal arrangements of the parts. Intelligent antiseptic methods eliminate the danger of infection.

Surgeons, pathologists and physiologists, have, for ages, been occupied in the study of regenerative osteogenesis and even until our own day, there is no unanimity of opinion among our ablest authors, on the question of the share which the periosteal envelope, the medulla or adjacent parts, contribute towards the protection of callus and solidification of bone. That there should be so wide a divergence of opinion among those accustomed to precise and exact scientific observation, is difficult to explain.

It is generally conceded that under ordinary circumstances the periosteum plays an important part, but that it is the sole agent, in bone reproduction has been denied.

It is important, however, before anything definitely can be undertaken, that some middle ground be reached and so have positive evidence of the divers functions of the fibrous membrane, that we may be acquainted with the various lesions in which it seems to be the sole regenerator and those in which it serves but a subsidiary part.

The periosteum is a thin, fibrous membrane which envelops and nourishes the bones. Histologically identical in composition and arrangement with ordinary thin, fibrous aponeuotic plates of tissue, its minute elements have no characteristic relations to each other, and the precise manner, in which its osteoplastic layer elaborates bone corpuscles is yet very imperfectly understood.

The bones are everywhere invested by this membrane, except where they are covered by cartilage at their articular ends. The muscles and their tendons, nearly all, arise from or are inserted into this membrane. In youth, when its regenerative power is greatest, it is thick and very vascular.

The bones of the skull are lined by separ-

* Read before the Metropolitan Medical Association of New York, June 10th, 1891.

ate layers of this membrane; the external being very delicate, but beneath the muscles is intimately adherent to the outer plate of the skull by numerous prolongations from its under surface, which penetrate deeply into the superficial lamellæ of bone.

Its osteogenetic powers are most active in early life and continues until the age of thirty or thirty-five, at which time it yet acts with energy, in elaborating ossific material in fracture, and retains this power until the end of life, to a certain degree, but after thirty-five it is incompetent to restore the loss made by a resected segment of bone.

The skeleton taken as a whole, in early life, owing to the preponderance of organic elements present, is pliant, elastic and vascular; but when middle life is reached, the diaphyses and epiphyses of the long bones have consolidated and the osteo-chondral structures have completely ossified.

The bones now have become more compact and brittle; hence are more liable to complete fracture and tardy repair.

The role of the bone marrow, as a factor in the regenerative process, has not yet been fully determined.

Nerve filaments ramify freely through the periosteum and penetrate the bone. It has recently been demonstrated that the lympatic vessels pierce the lamellæ of the compact substance and are numerous in the cancellous tissue of the articular ends. The healthy bone is everywhere very vascular and when fractured gives rise to a free extravasate.

(*a*) Although the various bones of the body possess physiological and anatomical features common to all, still clinically there is a wide difference in the nature and degree of their regenerative power when they have sustained a lesion of continuity.

(*b*) Manifold and complex are the conditions which favorably or unfavorably influence restorative osteogenesis.

(*c*) Besides, the various anatomical structures and histological elements, each manifest definite and characteristic peculiarities when the seat of pathological processes.

(*d*) The bones of different individuals otherwise healthy, vary greatly in fagility, and in propensity to unite, after fracture.

The failure of securing prompt union, without shortening, may be often readily accounted for by recourse to physics. With a bone as the femur, imbedded and acted upon, by powerful sets of muscles, to retain the broken ends in opposition, in fracture, without unbearable pain to the patient; danger of extensive excoriations and sloughing of the soft parts, is sometimes an almost insurmountable difficulty.

This trouble, in immobilization of the humerus is not encountered, yet it unites with difficulty. The bones of the forearm will, as a rule, unite much more quickly than those of the leg. The broken rib, which is in constant motion, will unite in a week, while a fracture of the inferior maxilla, which can be readjusted and fixed only with great difficulty, readily consolidates.

Fixation and immobilization of the fragments are indispensable in a general way, though, I have several times found, in cases of ununited fractures of the tibia that by removing the splints, retaining the simple bandage and putting the patient on crutches, motion rapidly ceased, at the point of fracture, and the full functions of the limb were quickly restored. Age, climate, season, diet, conditions of health and these species of fracture, all make their impress on the regenerative processes of bone.

There is never anything like full restoration of normal function in a limb, fractured after the meridian of life is reached. In very cold climates and in the frigid season of a temperate climate, it is a well-kown fact that union of a fractured bone is somewhat protracted. Among inmates of penal or pauper institutions, with the maimed after battle in times of war, badly housed and poorly fed, fractures fare very badly.

My experience has been that fractures in women, as a rule, do badly. They seem to occasion more pain and require a much longer time to firmly consolidate. This is notoriously the case in suckling and pregnant women.

Finally, there is a class morbidly prone to fracture. Many cases have come under my observation who have either simultaneously or consecutively fractured the same bones of both limbs, by moderate force. There are two cases now under my care—one a man of fifty, and a woman of fifty-five—with one the fall was but 10 feet, with the other, she simply stumbled. Both had double Colles. The point of fracture being in the same identical part of the radius.

Several cases have come under our observation of consecutive fracture, first of one bone, then at some time later, the same bone on the other side of the body. This is very commonly the case with the patella. So frequently has this consecutive fracturing, particularly of the lower end of the radius, occurred in my experience that just now when so many are ready to commence civil action

for damages, I make it an invariable custom to examine the opposite limb, so that should occasion arise, evidence may be submitted that the limb was normally wanting in firmness and strength.

The bone, anatomically, besides the periosteum is composed of other structures, which separately and collectively, possess singular and unique peculiarities; with which it is important, that at least, we should have a passing acquaintance; before we proceed to the study of practical osteoplasty.

Every bone of the human body except those forming cavities; as the orbital plate of the frontal; the os unguis, the palate vomer and turbinated and the ossicula auditus, are composed essentially of two substances, the compact and the cancellous. The flat bones are formed of two plates, between which is lodged, the cancellous tissue or the diplœ.

The irregular bones are composed mainly of spongy, osseous material, enclosed within a layer of compact tissue.

In the shafts of bones, compact tissue preponderates, while their articular ends are composed mainly of cancellous material.

As we might expect, when their is loss of substance in the shaft, which is enveloped by the periostum regeneration is more prompt and complete, than at the epiphyseal extremities, where this membrane is wanting.

The various elements of bone present a marked difference in their susceptibility to traumatic and pathological influences, in various stages of life, and in certain diseases.

In early childhood, peripheral or parenchymatous changes of the solid structures most frequently occur, as a result of injury, or of tubercular invasion; while in injured adults or those, the victims of constitutional syphilis, the periostial investment is almost invariably, the seat of primary pathological changes. In cancerous disease, destructive changes, indiscriminately spread through the osseous structures, with no marked predilection for any special histological element. It is interesting to note, that in sarcoma of young children when it develops in long shafts, its most frequent original nidus is in the medullary membrane; in close proximity to the distal, epiphyseal line.

The healthy bone taken as a whole, although tolerant of great pressure and concussive force, yet, when exposed to the atmosphere, rough manipulation, very hot or cold liquids, or irritating, antiseptic solutions, is extremely susceptible to irritation, which may terminate in acute or chronic inflammatory changes, that will give rise to very serious molecular transformations.

Hence, the explanation often, for consecutive periostitis, osteitis and osteo-myelitis; the reason why, not infrequently, after antiseptic amputations, with primary union, we so often see, recently, shapely, but irritable stumps, which can endure little, if any pressure and will possibly demand ultimately, consecutive resection.

Nails, ivory pegs, or wire are usually well borne in the cancellous parts, as in resection of the knee-joint, and serve a useful purpose, as accessories to fixation; but as a rule, the compact shafts of bone, violently resent their presence. It is claimed here, that a myelitis is first excited, and thence, by propagation extends into the lacunæ and canals of Havers. I have often observed when the shafts are wired, that there is usually a rapid and extensive suppuration of the overlying, soft parts, regardless of what antiseptic precautions may have been taken.

The diversity of tolerence. in the diaphyseal and ephyseal structures of the bones, will account for the surgeon's chariness, in dealing with fractured shafts of bone, particularly the femur which when fractured, in our time, one would think, by making a simple, compound fracture, the ends might be readily wired or pegged and all future shortening, wholly obviated, without imperilling life.

OSTEOPLASTY AND OSTEO-PLASTIC OPERATIONS.

Osteoplasty consists in such precedures as may be adopted by the surgeon, for injury, deformity, destruction or disease of any part of the osseous system, which are attended with division of the subjacent, or overlying soft parts.

Osteoplastic operations in general, after the scheme of M. Ollier, (Traite experimental et clinique de la Regeneration Des Os), may be divided into three classes, viz: homoœplastic, autoplastic and retoro-plastic; i. e. those in which, 1st. A displaced fragment of bone may be replaced from where it formerly came. 2nd. Those in which osseous tissue is transplanted from one region of the same body to the other; 3rd. Those cases in which bone is taken from one animal and inserted into the tissues of another species.

Ollier declares, very emphatically, after a very long, and most exacting series of experiments and clinical observations, that the two former, only, are at all practicable in surgery, and that any attempt at securing a permanent, durable consolidation by

attempting to engraft the elements of bone from the lower animal to man, must end, inevitably, in failure.

This does not imply, that one cannot insert a fresh fragment of bone, from the animal to man without exciting suppuration, or giving rise to serious disturbances; for one can do this with a piece of cork, metal or wood; but the successful, heterogenous transference of bone element is denied.

Many cases of success have been reported by zealous but indiscreet investigators, who, however, later were compelled to admit failure of assimilation; ultimately the foreign tissue, either giving rise to local ulceration, or undergoing digestion and absorption, through the action of the blood vessel and lymphatics.

The artificial tamponing or packing of bone cavities with decalcified, animal bone chips should scarce come under this category of heterogenous, osteoplastic procedures; as the analogy between this undertaking and the practice of transferring vital tissues, is rather strained and scarcely admissable. In this instance, we are dealing with dead bone; it having been subjected for days, to the macerating action of powerful acids, in dissolving out the lime salts; so that, physically and chemically there is no more comparison between this dry, limeless substance and the living vascular bone, than there is between the normal integament of an animal and the same, when it is transformed into leather. What share a large blood effusive serves, in the way of accellerating or retarding union, at the seat of a fracture, is yet, an mooted question; some alleging that it favors consolidation by undergoing osseous changes, while others regard its presence as an irriant; rather delaying regenerative changes. Latterly, it is said, by some, that when a bone cavity is filled, with aseptic blood and covered in by antiseptic dressings, it will undergo osseous changes and permanently assimilate itself, with the walls of the bone, which enclose it. That a blood-clot will undergo fibrous organization in the healthy subject, has been long known; but that it as a blood clot can take on primary, osseous changes, transforming itself from a fluid into bone, is not in accordance with pathological laws, or those governing regenerative processes.

Autoplastic and homœoplastic operations will, undoubtedly, hereafter play an important role in the surgery of the bones, pathological and traumatic. My own observations in osteoplastic procedures, have been so auspicious, as to induce me, to take such a bold and aggressive attitude, in connection with their application, in disorganizing traumatisms of the limbs; that under no circumstances, whatever, in civil life, do I believe we are now justified, in the performance of an immediate amputation; but, that resection should be always substituted for primary amputation. (Resection as a Substitute for Primary Amputation. *New England Medical Monthly,* July, 1891. By T. H. Manley, M. D.)

As will be seen in my brochure on this subject, that it is maintained, there-in that unless the force itself, at the time of accident, so crushes the limb—amputates it in fact—that it only hangs by a few tendonous shreds, which may be snipped away with the scissors, it should not be disturbed by any instrumental intervention whatever. The intelligent and conservative utilization of osteoplasty, conjoined with antiseptic methods must wholly revolutionize this domain of bone surgery. Hence, measures and methods, which, in their time, had much to commend them, must now be swept aside as antiquated; to make way for the latest innovations, which modern science has placed in our hands, and which we know, by a thorough and extended testing are so far unrivalled in their results.

No longer, will we see the deformity and helplessness, resulting from an irreduceable dislocation, while tenotomy, arthrotomy and ostectomy are so safely and rapidly performed. Certain varieties of paralysis, deformities and atrophies may now be largely obviated, or promptly rendered by a surgical therapy, which heretofore, was attended with imminent peril, both to the limb and even life itself.

It is immaterial whether osseous deformities are congenital or acquired; pathological or traumatic modern measures are equally applicable to all. Nor should we hesitate, because of extremes of age; for, my own results, in osteoclasis or osteoplastic operations on the new-born, in uranoplastic and hare-lip operations, performed, as soon as possible after birth—in three cases, on the second day of life—have been most satisfactory and such as could not have been realized, after advanced ossification was effected.

Homœoplastic operations have a wide range of application, and when performed with a clear idea of what it really is; with a rigid observance of detail and subsequent treatment, the results are all that can be desired.

Every compound fracture; single or

multiple, should usually now be treated, by a homœoplastic method, *i. e.* the displaced ends, or segments of living bones, with the muscular or connective tissue remaining in tact, and an ample blood supply, are brought into opposition, fixed and covered.

Now, these conditions must obtain in every instance, or else, what we do, is not an homœoplastic operation; as the fundamental requirements in any case; are, that the displaced bones have a vascular connection. The more extensive this connection, the less necrosis of the replaced fragments, and the more rapid and complete the cure. This I have verified on many occasions. It was immaterial of what shape or extent the displaced fragment, provided, it had a good grip on the adjacent tissues, it usually took on vitality and assimulated with the bone tissues, from whence it came.

I have never seen a fragment of bone which was wholly detached from a shaft after replacement, take on vitality. These operations failed every time, regardless of conditions.

The importance of bearing this fact in mind, cannot well be over estimated. Just now, when one might be lead to suppose that detached bone will consolidate, as claimed by many late observers. Now, one must not confound the imbedding of an aseptic fragment of bone; as may be done with a tooth, for the genuine ideal restitution of a living fragment, which is capable of regenerating itself.

Among the former, belong to that class of cases of cranial surgery, wherein, fragments or discs of chiselled or trephined bone, after having been removed, for a variable period of time, are replaced and an alleged re-ossificative of bone is effected so that the portal or chasm is filled in.

There can be no question, but when a button of osseous tissue is removed from the skull, it may, after replacement, acquire a more or less firm adhesion; but is no longer a substance, endowed with life and is at best, a foreign body; an incapsulation of it, is mistaken for assimilation and restitution. That this must be the case is evident to any one who will investigate into it precisely, what has been expected. First, the bone is *completely* cut away from the skull. Secondly, it is placed, in an antiseptic liquid, where it remains until it is restored, to fill in the gap, which it occasioned.

The antiseptic fluid simply presents septic infection and nothing more. It does not preserve its vitality; rather, by its permeating, irritant action on the endothelial lining of its reticular, vascular thickness, it thoroughly destroys it. Neither does it interfere with chemical or molecular changes; but on the other hand, by the free chlorine which is liberated, acting on the lime salts of the bone, it accelerates it. Once wholly freed from its vascular and neural structures, physiologically, "bone is no longer bone." This applies to the osseous structures, wherever situated.

Autoplastic operations comprize that class, wherein, we transfer a section of bone from one region to the other, in the same body. It has but a very limited application in the human body, and is employed almost solely, for the purpose of overcoming deformities; as when the nose has been destroyed and we essay to restore it; or construct a substitute. To ensure success in this procedure, the soft parts must be carried along with the bone *en masse* and firmly secured, until the graft has formed firm adhesions and attained an independent existence. Its technique is extremely difficult and complicated; trying to the surgeon; and, without resolution, with more than ordinary fortitude on the part of the patient, is utterly impracticable. Yet, autoplasty constitutes a valuable resource in proper cases, and should be ranked as one of the most important achievements of modern surgery.

Periosteal or heterotopic osteoplasty, consists in the transplantation of periosteal grafts from the shaft of the healthy bones, and sewing them into the tissues, where they are to be utilized as bone, when they have taken in osseous changes and development.

The periosteum being carefully dissected from one side of the convexity of the shaft, is transplanted into the loose cellular tissues, among which, it contracts adhesions and in a comparatively short time, undergoes in its new site, complete osseous transformation; a firm, thick plapue of bone forming within a very short space of time. This procedure has been utilized with great advantage in certain cases attended with loss of bone.

When the priosteum is removed in small sections, no harm will result to the denuded bones; as that part of the membrane remaining, is ample to maintain nutrition and prevent exfoliation.

The object in view, in all osteoplastic operations are to repair, preserve, and utilize bone substance. To give solidity shape, contour and durability to a part. This class of operation is based on extreme

concervation, and requires for its successful attainment, not only the most minute attention to technique and a discriminating judgment, but patience and perseverance as well. As life is not jeopardized, when reasonable precaution is exercised, we are the more justified in always commending a surgical resource, which will usually make no serious impress on vital processes.

There seems little more to learn, in relation to osteogenetic function, but there yet remains, a large field, in which to practically apply the knowledge of it, in our possession. That osteoplastic operation, which will result in the saving of thousands of limbs and joints which has heretofore, been sacrificed; prolong and render life more tolerable, has been incontestably proven.

With this invaluable acquisition in our possession, and our facilities for preserving limbs, heretofore sacrificed our obligations and responsibilities have been greatly augmented.

CHRONIC INGUINAL ADENITIS.

BY H. F. SLIFER, M. D.,

NORTH WALES, PA.

A boy four years of age, with a good history, and healthy parentage, began to fail in general health, during the summer of 1888. He complained of feeling weak, was listless and exceedingly pallid, with loss of appetite, and emaciation without any apparent cause.

This condition continued until November when he began to have pain in the right leg when walking long distances, this gradually grew worse, until it became intense, during the night if he attempted to turn or move the body, he would cry out with pain. His suffering appeared to emanate from the inside of the thigh. Pressure below Poupart's ligament over the pectineal fascia would produce pain, moving the leg was not painful, nor was motion impaired.

At this time no swelling could be detected, both limbs being alike in size and general appearance. After two months had elapsed, the pain in a degree abated. A slight fulness at the upper portion of the pectineal fascia now manifested itself, tender on pressure, but no elevation of temperature nor alteration in the hue of the skin.

One month later, the thigh began swelling at the upper part, which gradually continued down the limb, until the entire thigh was involved, the circumference being $1\frac{3}{4}$ inches greater than that of the opposite side; at no time did it extend beyond the knee.

The original swelling in the groin now increased to a considerable size, forming a tumor below Poupart's ligament and inside of the saphenous opening, two inches in its perpendicular diameter, due to induration of the inguinal glands; this enlargement presented firm resistance to pressure, was tender but not painful, no heat in the parts, nor constitutional fever.

The boy's general health was very much impaired, the appetite remained poor in spite of tonic treatment. He continued pale and emaciated to an alarming extent. I could ascertain no cause for this condition, other than lymphatic disease, confined chiefly to the inguinal glands, although the cervical glands were enlarged at times, but only for a short duration.

The most interesting feature of this case, was its obscure symptoms in the early stage of the disease.

The difficulty in arriving at a proper diagnosis arose from the fact that no local manifestation existed, except pain in the leg, and slight lameness at times, and failure of general health. The nature of the disease, however, became very evident, later on in its course.

A prominent physician, regarded the case one of incipient hip disease, and recommended rest in bed. This opinion was not in accordance with my view of the case. I objected to this procedure, on account of his debilitated condition, and his need of out door air and exercise.

Dr. John B. Deaver, of Philadelphia, saw the boy with me, and after a thorough examination, endorsed the diagnosis of chronic inguinal adenitis.

The pathology of the lymphatic glands is frequently overlooked in children, and its importance under-estimated. The early recognition of this condition may avert serious consequences. The profound anæmia attending these cases reveals a morbid constitution. It is evident that the nutritive functions are disturbed, absorption impeded, and the blood forming organs diseased.

The inflammation may be limited or it may extend to more distant glands. From the glands the disease may be conveyed along the connecting branches, to the deeper set of vessels, and the inflammation may also extend through the intervening tissue. Inflammation of the lymphatic vessels show a tendency to extend to the connective tissue, cellulits is, therefore, almost a constant accompaniment.

Hyperplasia of the cervical glands is common, resulting from eczema of the scalp or face, or from otitis, or any of the forms of stomatitis; the irritation is conducted to the glands through the lymphatic vessels. The same is true of the mesentric, axillary and inguinal glands. The slightest traumatism or irritation, such as solar rays, and friction of clothing, and sting of an insect, or pressure of a shoe, may set up superficial inflammatian, the toxic products of which are absorbed and conveyed to the glands.

Morbid changes in the lymphatics are frequently observed in children whose food is not sufficiently nutritive, or the digestive powers feeble. Children who have been prematurely weaned, and who have been given food that is not adapted to their age. Indeed, any condition interfering with the healthy state of the mucus membrane, or a break in the continuity of tissue anywhere, may permit the invasion of microbes and give rise to adenitis.

The usual termination of chornic adenitis is fibrous induration, caseous or scrofulous degeneration, amyloid degeneration and calcarious infiltration. The fibrous induration is common in the inguinal glands, and is frequently met with in this region without any morbid symptoms, as illustrated in the above case, exhibiting a chronic character from the beginning, and recovering without suppuration or degeneration.

The treatment was conducted on general principles. Directing special attention to his nutrition, proper diet and outdoor exercise. Administering from time to time, such agents as iodide of iron, iodide of potassium, syrup hypophosphites, elixir quinine, iron and strychnia, pepsin, etc. To the glandular induration I applied tincture iodine, mercurial ointment and ext. belladonna, with friction, and ordered the thigh bandaged. Under this treatment the boy gradually improved, but did not fully recover until Feb. 1890. At the present time he is enjoying perfect health.

THE DANGERS OF LEAVING THE PRODUCTS OF INFLAMMATION IN THE FEMALE PELVIS.*

BY CHAS. P. NOBLE, M. D.,

PHILADELPHIA.

The term, product of inflammation, in this paper, will include the various morbid conditions which result primarily or secondarily from pelvic inflammation.

The conditions which come properly under our title are salpingitis, including pyosalpinx, hydrosalpinx, hæmatosalpinx, catarrhal salpingitis with adhesions and without adhesions, ovaritis, including ovarian abscess, intraperitoneal inflammatory exudate, and cellulitis and pelvic abscess. Manifestly the danger to life from these conditions varies widely, and to avoid confusion it will be neccessary to consider them in detail.

The natural history of pyosalpinx is now well known, and the natural termination of the disease is the death of the patient by peritonitis; exceptionally by superinduced general diseases, such as phthisis or Bright's disease. I consider that the foregoing statement requires no support, because evidence upon this point is so demonstrative as to put it beyond dispute. At the same time it is admitted that, as an exceptional occurrence, a pyosalpinx will discharge itself through the uterus, or through the bowel or elsewhere, and a so-called "natural cure" take place. Or, as in other regions of the body, it is possible that the pus may become caseous, and the progress of the disease be arrested. In neither case, however, has a cure resulted—a crippled, occluded, painful, useless appendage remains to torment its possessor. Undoubtedly, then, while a single or double pyosalpinx remains in the pelvis, the danger to be apprehended is invalidism and death. Recurring attacks of peritonitis, any one of which may prove fatal, and gradual failure of the vital powers are only to be prevented by the removal of the diseased organ or organs.

All that has been said of pyosalpinx is even more true of abscess of the ovary, which, generally speaking, runs its course to death much more rapidly. Especially is this true of the puerperal variety.

These conditions result from salpingitis. Both are usually bilateral. Why the occluded tube at one time fills with pus, at another with serum and at another with blood, is an interesting problem yet to be solved. Supposedly it is due to the nature of the infection. Perhaps the occurrence of hæmorrhage into the tube is accidental. (No reference is made to hæmatosalpinx due to congenital or acquired atresia of the uterus or vagina.) While hydrosalpinx and hæmatosalpinx differ, they are alike that in both cases the tube is permanently occluded, at least at its fimbriated end, and, therefore, functionally useless. Hydrosalpinx is essentially a chronic disease, having an indefinite

*Read before the Philadelphia Obstetrical Society.

natural termination. Indeed, it has been argued that hydrosalpinx is a natural cure of salpingitis; to this view it is unnecessary to say that I do not subscribe. The history of hydrosalpinx is characterized by recurring attacks of peritonitis. The danger to life in such attacks is distinctly less than when the cause is pyosalpinx. The fluid contents of the tube are not necessarily septic. At times the uterine end of the tube becomes patulous, the result being the *hydros tubæ profluens* of the older authors. In this way the condition may be relieved, but a useless appendage is left. I have found hydrosalpinx, as a rule, in women in the thirties or forties, who have been invalids for years. Judging from my own experience a fatal termination must be rare; but invalidism has been constant. The effect produced by the menopause upon hydrosalpinx is unsettled. What has been said of hydrosalpinx is largely true of hæmatosalpinx. The fluid, however, is distinctly more septic. Hence the danger to life is distinctly greater. Both hydrosalpinx and hæmatosalpinx permanently destroy the function of the tubes; they produce invalidism by recurrences of peritonitis, and at times death.

This condition may be unilateral or bilateral. It entails suffering rather than endangers life. It is plain that salpingitis with adhesions becomes pyosalpinx, hæmatosalpinx or hydrosalpinx, if, through recurring attacks of inflammation, or through a progress of the catarrh, accumulation of the inflammatory products occur. It is in this way that the condition in question may endanger life. On the one hand the condition may become worse at any time; on the other it is more than questionable if it gets well. Provided the adhesions have occluded the fimbriated extremity, it is a permanently crippled, functionally useless tube. A woman having two occluded tubes must be permanently sterile, unless it be admitted that a tube once occluded by inflammatory exudate can become patulous. Removal of such organs is justified on the ground the they are useless, that their presence entails suffering, and may threaten life at any time through progress of the salpingitis.

At times salpingitis occurs and the tube remains patulous. This may be true even when the tube is bound down by old peritonitis. This class of cases is a most important one. The disease may progress from bad to worse; but this is not the only danger. This is the condition which causes tubal pregnancies, which is an ever-present danger. This condition of the tube often exists on one side, with graver disease, as pyosalpinx, on the other side. Salpingitis with a patulous tube does not endanger life in itself, but may by occasioning tubal pregnancy, or by becoming progressive.

It must not be forgotten that a healthy tube may be present on one side and a diseased tube on the other; thus uterine pregnancy may occur. It is probable, also, that uterine pregnancy may occur where one tube is patulous, even if slight catarrh is present. These considerations render plain supposed remarkable cures of grave tubal diseases, the cure being attested by subsequent pregnancy.

Most cases of chronic ovaritis are caused by salpingitis, and the ovarian condition is strictly subordinate. Chronic ovaritis does occur, however, independent of salpingitis, and is a most distressing condition. It produces invalidism, but never death, unless indirectly. Removal of such ovaries is justifiable after the failure of long-continued palliative treatment. This is likewise true of ovaries of the so-called infantile type—cases of partial development with small tubes and uterus. It is equally true that the removal of such ovaries is unjustifiable unless prolonged, well-directed treatment has been employed without success, and the health of the individual case is seriously compromised by the condition.

As it is impossible to remove these conditions by operation, it is plain that medical means alone can be employed. Intraperitoneal exudate from peritonitis may become purulent, when the pus must be evacuated by section; or it may form adhesions which may or may not cause pain or death, according to their nature. Cellulitis ends by resolution or pelvic abscess.

True pelvic abscess endangers life through sepsis, or peritonitis; should rupture into the peritoneal cavity occur, or by exhaustion where the pus has discharged itself spontaneously into the bowel, bladder or elsewhere. At times a spontaneous cure results, which is permanent, because the functionally active viscera are not necessarily crippled by the disease. Such abscesses are similar to those in other parts of the body, and the surgical law of early evacuation is equally applicable to them. They should be emptied at times through the vagina and at times above the groin; more often, another plan should be pursued. Such patients are often extremely ill when seen by the surgeon, and any error in diagnosis is of great gravity. Hence it is often best to do a median section in order to

exclude pyosalpinx and ovarian abscess, and then, if practicable, to evacuate the pus by a second incision above Poupart's ligament.

Having estimated the special dangers of each of the products of pelvic inflammation, there remain some considerations of a more general character.

One of the most distressing results of the failure to remove, especially the graver products of pelvic inflammation, is the occurrence of acute spreading peritonitis. Oftentimes the surgeon sees the patient for the first time when she is in this condition, she having had pelvic inflammation for years. Operation may be offered and done "as a last resort," "to give the patient a chance," and when done under these circumstances death usually follows. What is the cause of these deaths? Who should take the responsibility for these deaths—the surgeon, or the man who, through mistaken teachings, has kept these unfortunate women upon a so-called conservative treatment? The answer is plain—falsely called conservative teaching is responsible for these years of invalidism, with final death.

A class of cases is met with in which the nutrition is depraved, the nervous system has lost tone, and the digestive system is seriously disordered. Such women are best denominated "wrecks." They have had years of so-called conservative treatment, which has proved a dismal failure. Often the local pelvic disease is not great—chronic ovaritis, ill-developed pelvic organs, adherent appendages, or hydrosalpinx. In rare cases pyosalpinx is the condition found; but when pus is present, death usually results too quickly for the profound alterations in nutrition to occur which characterizes this class of women. When such women are operated upon and the pelvic disease removed, the health improves slowly and recovery is often incomplete. Such women often complain of pelvic pain after operation, which is due to the condition of the pelvic nerves, and the general nervous system produced by long years of invalidism. Such cases are often spoken of as demonstrating the failure of the operation to cure. Is not the failure to be attributed to delay—delay till complete restoration to health is well nigh impossible? Undoubtedly the sufferings of this class of women is greater (because longer continued) than any other. It is to be hoped that in the future timely operation will restore them to robust health.

Experience has proved that tubal pregnancy occurs in slightly diseased patulous tubes; the vibratile spermatozoa gain access to the tube, but the impregnated ovum is not propelled into the uterus, owing to lack of vermicular motion in the tube itself, or to the destruction of the ciliated tubal epithelium, or to partial strictures in the tube. This is an ever-present danger when one of the tubes is slightly diseased, no matter whether the other is healthy or profoundly altered by disease. Parvin estimates that one extra-uterine pregnancy occurs for every four hundred pregnancies, and the experience of to-day indicates that his estimate is accurate. What, then, is the probability of tubal pregnancy when a patulous, slightly inflamed tube exists? This question is certainly worthy of consideration in deciding for or against operation in the special class of cases in question. If such tubes were removed, tubal pregnancy could not occur.

The ætiology of tumors is undoubtedly obscure, and perhaps impossible to demonstrate. I have found small, thin-walled ovarian tumors and broad ligament cysts not infrequently when operating for long-standing salpingitis. It has seemed to me that in certain cases the relation was that of cause and effect.

Opposition to the removal of the uterine appendages is based, usually upon the ground that thereby the possibility of the occurrence of pregnancy is taken away. As the function of an occluded tube is destroyed, the objection is well grounded only in reference to the removal of healthy tubes, or slightly inflamed tubes which are patulous. Practically it refers only to the removal of slightly inflamed tubes because no one advocates the removal of healthy organs.

There is no doubt that pregnancy can take place through a slightly inflamed patulous tube; but, as has been pointed out, the pregnancy is likely to be tubal. Under the circumstances pregnancy is scarcely desirable. And this leads to a consideration of the general subject of pregnancy as complicated by salpingitis in its various forms, and by the adhesions resulting from peritonitis. Necessarily one tube must be healthy, or at least patulous, for pregnancy to take place. Instances of pregnancy occurring during the course of serious inflammation, with occlusion of both tubes, are clearly instances of mistaken diagnosis. Upon one side, at least, a mass of peritoneal exudate, or a mass composed of agglutinated bowels, has been mistaken for a distended tube. Given a functionally active ovary with a patulous tube, and pregnancy is possible. The opposite appendage may be seriously diseased—the tube inflamed and bound down, distended

with serum, blood or pus; or the ovary the seat of an abscess or an ovarian tumor. Under such circumstances, is pregnancy to be desired? On the other hand, is not the life of the woman seriously compromised by its occurrence, and especially by the processes of parturition? Is rupture or bruising of the diseased appendage, during labor, with dangerous or fatal peritonitis, to be invited? Or, on the other hand, is it not the part of wisdom to remove the diseased and dangerous structures, and to leave the healthy appendage to provide for future pregnancy? (The indications for unilateral or bilateral operations are omitted as not germane to the subject.)

Conservatism is the part of wisdom; it is that which preserves. In medicine this banner is raised by those who cry "hands off." It is a pertinent question as to whether their course is the part of wisdom, as to whether they really conserve the interests of those concerned—the sick. It seems plain to me that the considerations already presented amply prove that true conservatism lies not in the line of "let alone," but in the line of active surgical treatment. By the let-alone plan diseased organs are preserved that are functionally useless, that destroy the health, or cause the death of their unhapppy possessors. By early operations these diseased organs can be removed, women be restored to health and usefulness, countless years of invalidism be avoided, and many untimely deaths be prevented.

It is only just to say that this paper is based almost exclusively upon the study of cases of pelvic inflammation coming under my own observation. In the beginning my position was exactly the reverse of what it is now; but a widening of experience and the logic of facts forced an acceptance of the views set forth. My own experience has demonstrated to my own satisfaction that the results of (what is claimed to be) conservative treatment are at best negative, and commonly positively bad. In my more recent work many instances of the disastrous results of let-alone treatment in the hands of others have come under my observation.

Conclusions.—All cases of pyosalpinx, abscess of the ovary, hæmatosalpinx, and hydrosalpinx demand operation, unless contra-indicated by grave organic disease of the vital organs. The diseased organs should be removed. When gonorrhœa is the cause of the disease, the operation should be bilateral, even if one of the tubes is healthy. Operation is demanded because these conditions render the uterine appendages functionally useless, destroy health and threaten life.

All cases of occluded, adherent Fallopian tubes demand operation on practically the same grounds. In these cases the probability of death is less, but of invalidism equally great. The earlier the operation the greater the prospect of a cure.

All cases of true pelvic abscess demand operation.

Certain cases of chronic ovaritis and of partial development of the sexual organs demand operation—where health is seriously impaired and medical treatment continued over one or more years has failed.

Finally, the question is submitted for discussion as to the proper treatment of salpingitis with a patulous tube, taking into consideration the facts that at times a cure results, that at times the disease is progressive, and especially that this condition is the determining cause of tubal pregnancy.

Society Reports.

PROCEEDINGS OF THE PHILADELPHIA OBSTETRICAL SOCIETY.

Dr. Chas. P. Noble read a paper on "The Dangers of Leaving the Products of Inflammation in the Female Pelvis (see p. ——.)

Dr. Wm. H. Parish:—The conclusions presented are very safe and proper, and I have no unfavorable criticism to make. Probably most operators agree as to the propriety of operation, but the difficulty is to agree as to the condition actually present. As we all know, in a number of instances eminent gynæcologists have recommended and urged removal of the appendages as an absolute necessity, stating that sterility was present and that the future of the patient was one of great danger. And yet in some of these cases the patients have passed to a condition of fair health, have borne children and continued to enjoy a fair amount of health. This fact, however, has had an unfavorable influence upon the profession; while the publication of such cases should render the gynæcologist particularly careful in his examinations, and show the necessity of becoming a diagnostician as well as an operator.

The difficulty in diagnosing the condition present is considerable. I believe in giving the benefit of the doubt to the patient, and opening the abdomen and removing the

tubes or ovaries, or both. I am not altogether in harmony with the sentiment that it makes little difference whether we diagnose the exact condition or not. I recognize the impossibility of diagnosing the exact condition in many cases, but we should arrive at as close a diagnosis as possible. We should study the symptoms and compare them with the results found at the operation.

There are cases on the border line. If the patient's health is greatly disturbed and she has recurrent attacks of peritonitis, rendering her more or less of an invalid, it is not necessary to wait to demonstrate the presence of pus. The recurrent attacks of inflammation are sufficient to justify the removal of the appendages.

I have seen some curious instances of the difficulties attending the determination of the propriety of operation in individual cases. Not long ago, a prominent lady in this city had suffered for years prior to marriage with intermenstrual attacks of severe pain. The attacks continued after marriage, and a well-known gynæcologist was sent for. After one of these attacks of agony, he believed that she had an extra-uterine pregnancy. Time showed that this was not correct. Operation was, however, recommended. She then visited an eminent member of the profession in a neigboring city who advised her to leave that city very promptly, or she would have her ovaries taken out. He also said that she could not become pregnant. It happened that at the time he made the examination she was pregnant. She returned to this city, and was placed under my care, and a few weeks ago was delivered without difficulty. She had an attack of local peritonitis after delivery, but is now in fair health. She has a diseased ovary and tube on one side, and it may be necessary to operate on this patient. She may have trouble in the future, but this case shows that we cannot determine the necessity for operation in all cases. The point to be particularly dwelt upon is that the general profession is not justified in delaying or preventing operation when recommended by those who have the best opportunities for determining the propriety of operation. The tendency of many patients is to pass from one consultant to another, expecting to find some one who will favor delay. The result is that the delay complicates the condition seriously. Frequently the practitioner says that the operation was unjustifiable, and the fact that death follows shows that he was right in not wanting the operation done. I have heard a busy practitioner say that he had never had a case operated on for abdominal or pelvic conditions that did not die. I said to him: "Probably it is your fault, and not that of the operator." That is frequently the case.

As to pelvic cellulitis, I am sure that Dr. Noble agrees with me that it is a rare condition, and that it is seldom productive of abscess. That it does occur occasionally is true. Chronic pelvic abscess is almost a myth. It may exist as the result of tuberculosis, or be dependent upon disease of the lymphatic glands. Cellulitis, I think, exists only as an acute process following sepsis or labor, and then only occasionally.

In the last few weeks I have seen an extra-uterine pregnancy in a moribund patient, who had been treated by two practitioners for four months as a case of pelvic cellulitis. The patient died from the internal hæmorrhage.

There is one condition of the appendages which I think Dr. Noble did not dwell upon sufficiently, and that is tubercular disease of the appendages. There is strong reason to believe that in a few instances general tuberculosis has begun as a tubercular condition of the appendages. In such cases operation might cure absolutely the patient, or at any rate it might delay for a long time the extension of the tubercular condition to other portions of the body.

Dr. B. F. Baer:—I agree in the main with what Dr. Noble has written. I have passed through the same experience that he has with regard to so-called conservatism in the treatment of inflammatory disease of the ovaries and tubes, and now operate early where operation is required; but at the same time we must not forget that we may operate too soon or operate in cases where the disease is so slight that the patient might go through life and escape serious trouble. Great care and attention should be given to diagnosis, for that must decide the treatment.

Dr. Noble believes that most cases of pelvic disease are due to chronic salpingitis. That may be true, but I doubt it. I find many cases of disease of the ovaries with the tubes apparently healthy. This is especially the case in hæmatoma of the ovaries.

The suggestion that slightly diseased tubes should be removed for the prevention of extra-uterine pregnancy, I think a little too strong.

We do not know certainly that extra-uterine pregnancy is always caused by diseased tubes, nor to what extent the tube must be diseased to bring about that grave accident. There should be symptoms and

physical signs of disease before we operate.

The cases he has characterized as wrecks, require very careful consideration. I have, on several occasions, operated in this class of cases after prolonged palliative treatment had failed to be of more than temporary benefit, and have been sorry that I did so, and I have become very wary of them. If these cases could be operated early, much suffering might be avoided and cure effected, but, as I said, I have learned to regard removal of the ovaries as a means of cure for a broken nervous system with doubt.

In regard to the removal of undeveloped ovaries for amenorrhœa, I agree with Dr. Noble, but this also must not be accepted too literally, for in some cases the menstrual molimina ceases after a while, and the function of ovulation is then quiet. In such cases the removal of the organs would not be necessary. But if the patient is chlorotic and the effort at ovulation continues it would be better if the ovaries were removed.

I agree with Dr. Parish in regard to cellulitis or so-called true pelvic abscess. It is very rare. Some years ago cases of chronic pelvic abscess were met with, but since we have learned to operate early the true pathology has been found to originate in disease of the tubes or ovaries as to the starting point and focus, followed by peritonitis and not cellulitis, except as a secondary or minor complication.

The suggestion that an exploratory laparotomy be first made to determine whether the case be a true pelvic abscess or not, and that if it is found to be such to make an incision along Poupart's ligament, is good, for it will not often be necessary to make the second incision, because by the first the trouble will be found within the peritoneal cavity.

Dr. J. Price :—The ground has been well covered. I am glad to hear Dr. Parish and Dr. Baer speak so plainly on pelvic abscess, a subject which has given us much anxiety and not a little condemnation.

Dr. Noble has called attention to the deaths, and has alluded to the dangers of delay. I have in my hand several letters bearing on this point. One is from a patient. She says: "Dr. —— opened my abdomen for pelvic abscess, but found a mass so large that he could not remove it. He then made an incision in the vagina, and there still exists an opening in my bowel which communicates with the opening in the vagina, through which I pass my motions." In the *American Journal of Obstetrics*, a year ago, Emmett reported cases in which he opened the abdomen and found the adhesions so extensive that he incised the vaginal vault. It has been my misfortune to have many of these cases to deal with.

In all pelvic cases delay not only complicates the operation but diminishes the prospect of a cure. Delay is responsible for that group of cases known as imperfect cures, and these have been cited in opposition to all pelvic surgery. These results are sequelæ of the delay, and not of the operation. If you have to denude the pelvic cavity of peritonæum, or if it has disappeared, there must be adhesions from which the patient may continue to suffer. These are the cases in which a second operation is required for the relief of the adhesions. The second operation cures; the first could not. It saved life, but it could not cure the woman and make her sound and healthy.

Dr. Barton C. Hirst :—I am strongly at variance with some of the views expressed in this paper. That pyosalpinx and ovarian abscess demand operation will generally be admitted, but that hæmatosalpinx, hydrosalpinx and adherent tubes *demand* an abdominal section will not be allowed by many gynæcologists, or by the bulk of general practitioners, who, by the way, have better judgment in these matters than they are often credited with in special societies like this. There are two dangers, I think, which the abdominal surgeon should carefully guard himself against. One is the desire to operate as often as possible, and the other is the disposition to underestimate the dangers of abdominal section. As an illustration of the first, not long ago I heard a prominent gynæcologist describe his sensations while operating. During the progress of the operation he was anxious; he would be glad when it was over; but directly after a rest and dinner he would want to do another. As an illustration of the second, I heard from one gentleman this evening that the mortality of operations for tubal diseases is practically nil, and from another that the mortality may be expressed by one in five hundred. It is, I believe, a knowledge of this tendency that often deters the general practitioner from sending cases to the gynæcologist when he should. My judgment is that these cases of hæmatosalpinx, hydrosalpinx and adherent tubes *may require* operation by the development of symptoms, but that they *demand* it without reservation is not correct. Circumstances should govern us. In women at the Philadelphia Hospital I have operated on slighter grounds than I would in private practice. These women, by slight pelvic dis-

ease, are incapacitated for their work, and their pelvic disease means not only invalidism but pauperism. I have had lately, in private practice—to illustrate what I mean—three women with bad pelvic disease. The tubes are distended on both sides, and in one case there may be pus. These women date their trouble back some years, one twelve years, to a neglected confinement. That woman is somewhat of an invalid, but in good circumstances, and the mother of a large family. She goes to Europe every summer, takes long walks in Switzerland, and enjoys life. I should not dream of operating unless she presented more serious symptoms. The only symptom that annoys her is a recurrent severe hæmorrhage from the uterus at long intervals. I have seen a number of cases in which this symptom was present, but it can be checked by proper treatment.

I am astonished to hear so little said about the mortality of the operation. There is probably not one present who has not seen women die from the operation, who would have lived indefinitely with the condition for which the operation was done. It is a mistake to omit all mention of this.

To my mind it is wrong to lay down a dogmatic rule in regard to operating on these cases. Even where there is pus there are really few who die directly from its presence, but it is true that the great majority come to an operation because their symptoms demand it. In considering other tubal diseases each case must be judged on its own merits, and the man will not do full justice to his patients who is guided by the invariable rule that pelvic inflammation involving any lesion in the tubes demands abdominal section.

In regard to abdominal section for amenorrhœa with ill-developed ovaries, I cannot understand the necessity for operation. There is, however, a condition which justifies operation. There are women who have ill-developed uteri and tubes, but well-developed ovaries. Such persons may suffer intense pain at the menstrual periods. We find the ovaries enlarged. In one such case, that of a girl of 20 years, treated by myself and two others without relief, I operated and found the ovaries unusally large. I also found a corpus luteum as large as that of pregnancy, and yet the girl never menstruated. Her uterus and tubes were unable to drain off the pelvic congestion which occurred every month. In such cases the operation may be demanded, but in amenorrhœa, with imperfect development of the whole sexual apparatus, I do not see the necessity for such radical treatment.

Dr. Chas. P. Noble:—May I ask a question? I would ask Dr. Hirst on what ground he would desire to preserve the tubes where they are occluded and filled with fluid, whether serum or pus? Of what benefit are such organs to a woman?

Dr. Barton C. Hirst:—In all these operations there is a possibility of a fatal termination which should not be lost sight of. Where a woman does not suffer seriously and is able to enjoy life, I should not operate. In the case to which I referred the uterus is firmly bound down. There are tumors on each side of it, and the tubes are distended with fluid; and I should not be surprised if some inspissated pus were present. Even in that case I should not operate unless the woman was absolutely an invalid, or had recurrent attacks of peritonitis.

Dr. W. H. Parish:—Dr. Hirst seems to stand up here as the representative of the general profession to defend it. Dr. Hirst well knows that the remarks that have been made have been directed against certain general practioners. He knows very well that the members of this society are highly appreciative of the general practitioner. I say this because the remarks of Dr. Hirst, when in print, would make it look as if we felt ourselves superior to the general practitioner.

As Dr. Hirst has said, some patients die that might have lived for years, but most of these die because the operation was done too late. That is the reason that I referred to the dangers attending delay. It is more important that we should dwell upon this fact than upon the fact that some die where the lesion is not severe. The number that die from delay or because a necessary operation was not performed is much greater than the number who die from unnecessary operation.

Dr. J. M. Baldy:—I hardly think that any one would hesitate when pus is present, but we must recognize that occasionally the patient may have something to say on the subject. I do not believe that all cases of pyosalpinx die quickly as the author of the paper said. I have operated on cases where pus had been present for eight or ten years. Pyosalpinx can be a chronic as well as an acute trouble. I do not mean that we should not operate. If I had my choice I should operate in every case; but if the woman objected, I would not feel that she must necessarily die. A certain number will, it is true, die quickly, but not the majority.

In regard to the collections of fluid in oc-

cluded tubes, I would say that I do not believe in hæmatosalpinx. With very few exceptions these are cases of extra-uterine pregnancy. Hydrosalpinx is hardly ever fatal. We do not always operate for fatal diseases. As far as the operation is concerned a case may die that should not die. But where one case dies thus, there are hundreds that suffer the tortures of the damned. Sometimes they suffer more from hydrosalpinx than from pyosalpinx. I should advise that cases of hydrosalpinx be operated upon, and I feel that such tubes could be removed with as much safety as simple ovarian cysts—that is, with no mortality. The disease is not liable to kill unless there are repeated attacks of peritonitis. The patient will then suffer as much risk from the peritonitis as from the operation, but instead of running the risk once she runs it three, fifteen or twenty times in as many years.

I can see no reason for treating amenorrhœa by abdominal section or by medicine. If there is amenorrhœa, nature has good reason for it. It is not a local condition. I see no reason for interfering, except with general constitutional measures. If the woman suffers, she does not suffer from the amenorrhœa, but from other conditions. The amenorrhœa is merely a symptom and should be let alone. Many of these cases with ill-developed appendages and uteri have other symptoms than amenorrhœa. If they have great pain, and you operate for that, I have nothing to say against the operation. It is sometimes justifiable.

True pelvic abscess may be met with, but with an experience of three or four hundred sections in my own and other hands, I have not met with it.

In regard to cases of salpingitis, especially those with patulous tubes, possibly this may be one of the causes of extra-uterine pregnancy; but if we are going to remove such tubes to prevent extra-uterine pregnancy, we shall remove half of the tubes in the country. Most married women have inflammation of the tube at some time or other. If we could pick out the cases that are going to have extra-uterine pregnancy, the operation would be proper. In inflamed tubes, with patulous openings, pregnancy may cause complications, but acute or sub-acute inflammation in any part will get well, and I see no reason for operation in these cases until the patient has gone through a long course of treatment. My experience is that most of these women suffer as much after operation as before, so that the trouble, apparently, has not been in the tube alone. It has been a case of mistaken diagnosis. I do not believe that in the vast majority of instances chronic ovaritis is due to salpingitis, nor do I believe that we can always tell chronic ovaritis when we have the ovaries in our hands. The diagnosis is made on the symptoms, and there is nothing more deceptive than symptomology in these troubles. Where there is the greatest disease there may be few symptoms, and where there is little disease there may be severe symptoms.

The "wrecks" I often feel like letting alone. Operation in these cases brings little benefit to the patient and little credit to the operator. The mortality will always be greater, and the results less satisfactory.

Dr. M. Price:—I want to refer to Dr. Hirst's remarks in regard to the country practitioner. In my experience the country practitioner has made the diagnosis and told me what he wanted done. There are few that do not know about pelvic troubles. There is no danger that he will select cases that can go to Europe every summer and walk over the mountainous districts of Switzerland. In the cases that I have seen, the patient insists upon operation. I believe firmly that not a single case of the description laid down in that particular list should die. I never saw one die. The cases that die are those which come in a dying condition. There are a number of cases dying, but it is the operator's fault. We all make mistakes, but I have never operated without knowing that there was something to operate for.

Dr. Joseph Hoffman:—When a man is uncertain of the rules that require him to operate, he must make many mistakes. The man who looks for success must have his reasons and rules before him subject to variation. He must know what cases will give mortality. We have no business to say that hæmatosalpinx and hydrosalpinx will give mortality when simple ovarian cyst does not. In all cases the mortality should not exceed three or four per cent.

How many more go down without operation.

It is a mistake to assume that hydrosalpinx is inoffensive. I have known the most serious symptoms to come on in these cases. Hæmatosalpinx, hydrosalpinx and pyosalpinx are interchangeable. We do not know where the margins lap, we do not know when one will pass into the other. I have seen hæmatosalpinx that was not extra-uterine pregnancy.

In regard to pelvic cellulitis, so-called, Bernutz holds that out of the cases he has

examined post-mortem, pelvi-peritonitis is the cause of visceral adhesions, and is symptomatic of tubal and ovarian disease. Until we have an experience approaching that of that man in pathology, it is fair to believe that there is some error in the opinion. Those who have looked up the doctrine of Nonat have found it wiped out. I do not assert that there may not be peri-uterine inflammation following confinement, but this is not to be considered chronic pelvic cellulitis, for it is a broad-ligament involvement. Inflammation after confinement probably originates in the uterus, but no one will ever find a chronic inflammation of that sort. There is simply an effusion which will pass away. If we use the term cellulitis in this sense, it is misleading.

I think with Dr. Baldy that it is unjustifiable to deal with amenorrhœa as a surgical affection. When a patient run down by some prolonged disease comes with amenorrhœa, we do not think of operation—we treat her by hygienic measures. If the organs are infantile, there is no reason for menstruation.

In regard to carrying pus tubes a lifetime without bad result, it has been demonstrated beyond question that although pus may be carried a long time, yet it always makes disease somewhere else. Pus anywhere else in the body is always let out—why not in the pelvis?

Dr. G. Betton Massey:—With all due deference to Dr. Noble, I must say that the paper appeared to me very much like a patent medicine advertisement. We are given a succint list of diseases and are told to take for each—not so-and-so's bitters, but an operation. The author of the paper has perhaps unconsciously, fallen into the error of looking upon one thing as a panacea, giving routine directions for treatment by an operation which runs the risk of killing the patient, and this in spite of the impossibility of exact diagnosis. As has been so often said on this floor, very few of these conditions can be accurately diagnosed, with the exception, perhaps, of large pus tubes or cystic ovaries.

To go to the root of the matter, most of these diseases are, it is true, one or another phase of inflammation, but is it not the duty of the physician to combat this process rather than remove some of its products? The argument of the paper tends to obscure the fact that, taken in time, this process can be arrested by local and general treatment.

Gynæcologists should pause and reflect on the singular extravagance of the position assumed by some. In what other specialty are the products of inflammation cut out unless they are encysted or purulent? We should combat inflammation itself rather than amputate a part because it is inflamed. Should we cut out a tube because it is adherent, if the woman can be freed from all pain or trouble referable to it? We do not cut out a lung because it is adherent to the chest wall as a result of pleurisy. I maintain that if we can relieve the patient permanently there is no occasion for more radical measures in any of the conditions mentioned in the paper.

Dr. C. P. Noble:—My object in reading this paper was to elicit discussion on the broad subject of pelvic inflammation, and I am glad that its object has been accomplished—discussion elicited. I was led to write it by the remarkable communication which appeared in the *British Medical Journal* by two "obstetric physicians," Drs. Williams and Champneys, and by the paper recently read by Dr. Baldy in this Society. The English physicians utterly fail to appreciate the advances made in gynæcology during the past fifteen years. They accept ovariotomy as justifiable, but reject operation for the removal of diseased uterine appendages. Dr. Baldy, also appears to be very doubtful of the grounds on which he stands. Under the circumstances, it seemed to me that a general discussion of the subject would be of advantage to us all. Dr. Parish referred to mistakes in diagnosis and prognosis. I alluded to that in my paper, incidentally. There is no doubt that such errors reflect badly upon surgery, and they discourage the general practitioner from accepting the teachings of to-day. Although he is wise in his own department, he is not necessarily an expert in pelvic disease. My own opinion in regard to these mistakes is that the diagnosis is made too quickly, often from a single examination. Mistakes are made most easily if the examination is made shortly after an acute attack of peritonitis. Finding a fixed mass the examiner concludes that it is a distended tube or a bound-down ovarian tumor, whereas it may simply be an exudate around the tube or ovary. Of course, if the patient is dying from the condition, we do not care what it is, we have to operate to save life; otherwise, the physician should aim at exact diagnosis. The mistakes in prognosis in regard to sterility usually come about in this way. There is found a mass of exudate, or the bowels are bound together, and it is concluded that the tubes are distended and occluded, and a prognosis of sterility is given, although the conditions present need not en-

tail sterility. Such mistakes can only be avoided by greater care, especially by a longer study of cases before giving an opinion. It is difficult to speak concerning pelvic cellulitis, and especially pelvic abscess, before this Society, because it is a fashion here to distort one's statements concerning these conditions. No one believes more strongly than I do that the ordinary form of pelvic inflammation is salpingitis with peritonitis, yet I have seen pelvic cellulitis and true pelvic abscess. Because some gentleman has not seen it, am I to doubt the evidence of my own senses? Those gentlemen who say that it does not occur make some egregious blunders. Those cases in which inflammation occurs after labor, with great masses of exudate in the pelvis, and the women get well and bear children, are cases of acute puerperal cellulitis. These masses are exudates. In the processes of labor, lacerations occur; and if there is infection, cellulitis may follow. I have seen three true pelvic abscesses within two years, in which the abdomen was opened and nothing found the matter with the tubes. I shall report these in full at an early day. At the same time, it is not the less true that in many cases of puerperal pelvic inflammation cellulitis does not occur. The inflammation is confined to the vagina or to the uterus; or it spreads along the tubes, and at times to the peritoneum. The very wonderful researches of Bernutz have been referred to wrongly to-night. Bernutz did not claim that pelvic abscess does not occur, but that cellulitis does not take place, as Nonat held, in the cellular tissue, between the uterus and its peritoneal covering and immediately adjacent to the cervix. He admits that we have what he calls iliac phlegmon and abscess in the broad ligament and peri-rectal connective tissue. His claim is that what he and we recognize as tubal disease is not cellulitis of the tissue between the uterus and the peritoneum, as is claimed by Nonat. All honor to him for demonstrating the fact! I have also seen cellulitis after laparotomy, where the stump has become infected. I am sure that many cases of so-called hæmatoma after section, as mentioned by Tait, are nothing but cellulitis, possibly with peritonitis, of the broad ligament—an infected pedicle. I did an exploratory section in one case that demonstrated this absolutely.

With regard to salpingitis as a cause of ovaritis, I said that most cases of *ovaritis* were caused by salpingitis, not most cases of ovarian disease. I would not at all hold that very many cases of ovarian disease, cystic ovaries or ovarian hæmatoma or cystoma are caused by tubal disease.

In the paper I carefully abstained from dogmatism regarding the proper treatment of salpingitis with patulous tubes, because I feel that the subject is debatable. I should hesitate to operate in all cases of slight tubal disease. But these conditions are not the simple affections that we are apt to consider them, and they may lead to serious trouble. In reference to Dr. Hirst's remarks, not to remove pelvic disease unless of the gravest character, I have only to say that I differ with Dr. Hirst. I think that it is such teaching as his that is the cause of most of the deaths in abdominal surgery. In these cases of slight disease there should be practically no mortality. If the vital organs were healthy I should never expect death; and the operation should not be done unless the viscera be healthy. One death in several hundred would be an ample allowance. This certainly would not weigh against the many deaths which would occur in such cases from neglect.

Dr. Baldy states that I hold that patients with pyosalpinx die quickly. In general the course of pelvic inflammation, complicated with pus, is not a long one, but there are exceptions. I said in the paper that some cases of pyosalpinx get relatively well, although crippled and useless appendages were left in the pelvis; and I have removed a tube containing a pint of pus that the woman had carried for seventeen years. Another was of eight years' duration. The first woman was an absolute wreck. For two years she has been relatively well.

Amenorrhœa was not referred to in the paper. The cases referred to were those in which menstruation does occur, although imperfectly, and with great pain; and often intermenstrual pain is present. Where the lack of development is extreme we have amenorrhœa, but I should think that such cases would seldom present symptoms calling for removal of the appendages. The cases that I have seen have been great sufferers and have been subjected to all forms of palliative treatment without benefit.

I did not refer to wrecks from other causes than pelvic disease. It would be folly to remove the tubes and ovaries in wrecks from other causes. The results in these cases are not brilliant, but have been good enough to encourage me to continue to operate, always giving a guarded prognosis as to final cure, and insisting upon the necessity for prolonged treatment after the operation.

I do not know that I have anything to say in answer to Dr. Massey's remarks. His arguments doubtless appear cogent to him, or he would not advance them, but to me they are pointless. It seems to me that he overlooks entirely the natural history of pelvic inflammation and also the results and dangers that follow, if diseased structures are left in the pelvis.

SELECTED FORMULÆ.

ERYSIPELAS.

Dr. Rothe (*British and Colonial Druggist*) has used an ointment prepared as follows:

℞
Creolin..... 1½ parts.
Creta præp.
Axung. porc.....aa.....15 "
Ol. menth. pip..... 5 drops.

This is spread in the thickness of the blade of a knife over the diseased parts twice or three times a day, a thin layer of cotton-wool being applied as a covering.

ABORTIVE TREATMENT OF HERPES.

Leloir (*La Tribune Médicale*) recommends a small piece of gauze soaked in one of the following solutions to be applied:

℞
Resorcin.....grammes 100.
Alcohol (90 per cent.)..... " 2.
M.

Or,

℞
Menthol.....grammes 1.
Alcohol (60 per cent.)..... " 100.

If there is much pain use can be made of

℞
Cocainæ muriat.....gramme 1.
Ext. cannabis indic.....grammes 10.
Essen. menth. pip..... " 10.
Alcoholis (90 per cent.)..... " 100.

PARASITICIDE OINTMENT.

L'Union Médicale gives the following ointment for the destruction of parasites:

℞
Salicylic acid.....45 grains.
Borax.....15 grains.
Balsam of Peru.....30 grains.
Ethereal essence of anise..... 5 drops.
Essence of bergamot.....20 drops.
Vaselin..... 6 drachms.

Make into an ointment and apply to the part affected.

GARGLE TO PREVENT DENTAL CARIES.

℞
Tannin..... 5 gm.
Tincture of iodine
Tinct. of myrrh, aa.....2½ gm.
Iodide of potassium..... 1 gm.
Rose water.....180 gm. M.

S. A teaspoonful in a glass of water, to be gargled every morning.

—*Nouveaux Rémedies.*

NIGHT-SWEATS.

The following prescriptions for the relief of night-sweats are published in the *Revue Général de Clinique et de Thérapeutiqué:*

℞
Sulphate or tannate of quinine.....gr. xv.
Powdered ergot..... .....gr. xxx.
Divide into four powders, and take two or three in the course of the day.

This prescription is also valuable in cases having a tendency to hæmoptysis. Or,

℞
Powdered agaricine.....3j.
Make into four powders, and take one powder at night.

℞
Powdered agaricine.....3j.
Powdered belladonna-root.....gr. vij.
Divide into four powders, take one powder at night.

℞
Powdered agaricine.....3j.
Tannin.....3j.
Make into four powders, and take one or two powders a day.

—*Medical News.*

INDIGESTION WITH CONSTIPATION AND FLATULENCY.

A favorite perscription of the outdoor medical department of the Jefferson Medical College Hospital, in cases of difficult digestion accompanied by constipation and flatulency, is the following:

℞
Tinct. nucis vomicæ
Tinct. belladonna
Tinct. physostigmatis, aa.....f 3ij.
Ext. cascaræ fluid.....f 3vj.
Ext. erythroxylon, q. s.....f 3iij.
M. Sig. A teaspoonful after each meal.

NEW TREATMENT OF HERPES ZOSTER.

MIXTURE.

℞
Extract gelsemium, Sodium sulpho-carbolate } of each..... 4 grammes.
Distilled water.....90 grammes.
Teaspoonful every two hours.

At the same time 5 drops tincture of belladonna are administered every two hours until a slight dryness of the pharynx is experienced.

LOTION.

℞
Lead acetate, Powdered alum } of each.....4 grammes.
Distilled water.....120 grammes.
M. Sig. Externally.

Compresses moistened with this solution are applied to the affected parts, and renewed every two hours. According to the author, pain disappears within a few hours, and the disease is considerably shortened by this treatment.—*Merck's Bulletin.*

LOCAL ANÆSTHETIC FOR COMPARATIVELY PAINLESS EXTRACTION OF TEETH.

As one of the great corps of "country doctors" who act in almost every capacity for their patrons, I submit the following formula as a local anæsthetic for the almost painless extraction of teeth:

℞

Hydrochlorate cocaine..... 5 parts.
Crystal. carbolic acid..... 6 parts.
Pine gum camphor..... 6 parts.
95 per cent. alcohol q. s. to make 120 parts.
Mix.

Inject one to three minims of this mixture, with a hypodermic syringe, deeply into the gum on the inner and outer sides of the tooth. Apply over the gum a piece of absorbent cotton wet in the solution. Wait four to five minutes. The gum can then be freely incised, and the tooth drawn with a minimum amount of pain. Try it.—J. Wilton Hope, M. D., *Va. Med. Monthly.*

BROMIDES WITH BISMUTH AND NAPHTHOL.

Pharmacists have been surprised of late at the number of prescriptions they have had of the bromides united with bismuth and naphthol. They have now discovered the cause. M. Féré, of the Salpêtrière, finding that large doses of bromide of potassium disagreed with such of his nervous patients as had gastric troubles, sought for a combination which would enable him to give the bromides with impunity. He finally settled upon the following formula:

℞

Bromide of potassium.....6 grammes.
Beta-naphthol.....4 grammes.
Salicylate of bismuth.....2 grammes.
Divide in 3 doses, and give 1 dose three times daily.

This is the prescription which many physicians are now trying for their nervo-gastric patients. Some of them add $\frac{1}{30}$ grain of sulphate of strychnine to the above.—*Paris Letter in Pharm. Record.*

HYDRASTININE IN MENSTRUAL HÆMORRHAGE.

Falk has found that hydrastinine is very effective in congestive dysmenorrhœa, menstrual hæmorrhages due to a change in the texture of the uterus, in metrorrhagia due to endometritis, in myoma, etc. He orders the following:

℞

Hydrastinini muriat.....¾ gr.
Ext. glycirrhizæ, q. s.
Ft. tal. pil. No. X.
Sig. Take one or two pills daily.

One pill should be taken a few days before the hæmorrhage begins, and two while it continues.—*St. Louis Med. and Surg. Journal.*

TRINITRINE FOR ANGINA PECTORIS.

Trinitrine or nitroglycerin has been very largely used, particularly in France, in the treatment of angina pectoris, and is without doubt a valuable remedy for this disease. According to the studies of Huchard, Potaie and Herard, who have studied its physiological action particularly in relation to its use in angina pectoris, the drug is a vaso-dilator resembling very closely nitrite of amyl. Bocquillon uses it in the following manner:

℞

Alcoholic solution of trinitrine
(1 per cent.).....30 drops.
Distilled water.....10 ounces. M.
Two teaspoonfuls morning, noon and night.

For subcutaneous injection he uses the following solution:

℞

Alcoholic solution of trinitrine
(1 per cent.).....30 drops.
Cherry-laurel water..... 3 ounces. M.
Twenty minims of this may be given hypodermically.

—*Med. News.*

TO REMOVE DARK COLOR FROM COMEDONES.

The *British Journal of Dermatology*, February, 1891, gives the following prescription of Unna and Leistokow for removing the unsightly "black-heads" which are so often an annoyance to a patient and a trouble to the physician:

℞

Lanolin..... 10 parts.
Vaselin..... 20 parts.
Peroxide of hydrogen.....20-40 parts.

LACTIC ACID IN INFANCY DIARRHŒAS.

Dr. Thomas claims excellent results from the following mixture in gastric or gastro-intestinal dyspepsia, characterized by nausea, vomiting, flatulence and diarrhœa with non-slimy fœtid, yellowish or greenish stools:

℞

Lactic acid.....℥j.
Simple syrup.....℥v.
Water.....℥iijss.
M. Sig. ℥j every quarter to half hour after meals.

—*Rev. med. de la Suisse Romande.*

THE

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The Editor will be pleased to get medical news, but it is important that brevity and actual interest shall characterize communications intended for publication.

LEADING ARTICLES.

HYPEREMESIS GRAVIDARUM.

Concerning no subject in obstetrics has there been greater confusion of ideas than the uncontrollable vomiting of pregnancy. Each writer has had a different theory concerning its essential nature, and the list of remedies and cures which have been vaunted is a long one. Prominent among the theories which have been advanced concerning its pathology are the following:

1. The theory of Bennet that the vomiting is often due to inflammation of the cervix. 2. That of Hewitt, that it is due to mechanical causes, as flexion or version or incarceration of the uterus, or to undue hardness or rigidity of the tissues about the *os internum*. 3. That of Veit and others that it is due to inflammation of the uterus, especially to endometritis. 4. That of Kaltenbach, that it is hysterical in nature. 5. And finally, the old theory that it is a reflex act, proceeding from the development of the pregnant uterus which is free from disease. Each of these theories is based upon studies of cases, and can be amply illustrated; hence, each must be accepted as containing a basis of fact.

It seems to us that the present status of this subject is far more satisfactory than it has been in the past. If well settled principles have not been formulated, at least well settled facts concerning the condition are in our possession which must be of the greatest value to the well informed physician in his management of cases of this affection. But is it not also true that sufficient facts are before us to justify certain conclusions? It is well known that pregnancy influences the entire system of the gravida, and that the nervous system is profoundly influenced by the condition. The nervous system becomes more irritable—grievous effects are produced by lesser stimuli, no matter what their peripheral origin. It is equally well established by clinical evidence that pregnancy causes vomiting—even though the *modus operandi* be obscure. If this increased irritability of the nervous system be accepted as the basal fact in hyperemesis gravidarum, the entire

subject becomes wonderfully simplified. Certainly a good working basis is attained. When the individual comes before the practitioner, his duty is not done when he makes the diagnosis. This simply gives him the cue for the general management of the case, the avoidance of all sources of irritation of a general nature, the regulation of the secretions of the body, the use of suitable diet, and the administration of drugs to lessen the irritability or to increase the tone of the nervous system. But his task is just begun. He must determine the particular causation factor or factors in the individual case, whether it be an inflammation of the cervix, the uterus or its appendages ; or a displacement or hyperæsthesia of these organs ; or some condition of the general system which is depressing vitality ; or, finally, if it be hysteria. Each case becomes a special study, and a full diagnosis is to be made only after careful investigation.

Were all the facts now before the profession concerning the pernicious vomiting of pregnancy generally known and appreciated, death from this cause would occur less often. The practitioner who treats it in a perfunctory way until the victim is in extremis, or tries the more rational methods of treatment after it is too late, or calls in counsel to discuss the advisability of inducing abortion when she is beyond assistance, fails in his duty.

A WORTHY PROJECT.

Among medical men in this country may frequently be found those who, by stress of conditions beyond control—the toil of a tiresome calling, and the aches and pains that come to them, oftimes in larger measure than to those they serve—have gone down before the imperious power of Opium, Chloral or Cocaine.

Most of them, perhaps, are well enough off in this world's wares to compensate one who may extend a helping hand to draw them out of the narcotic slough, but some—many, we have reason to think, are not so happily situated, and plod wearily on, longingly waiting for the time when it will be their good fortune by dint of improved conditions to secure the succor desired. This is no fancy picture—we know of just such cases.

These and their friends will be glad to know that there is now the chance of getting such wished-for relief " without money, without price"—an opportunity nowhere else offered—and under conditions that promise most largely the result desired. We refer to the Brooklyn Home for Habitues, recently opened in that city under the care of a gentleman who has long given exclusive attention to narcotic disease, and is regarded among the highest authorities in his specialty in America.

This Home, a spacious building with especially attractive surroundings, is now open, and one-fourth of it free to worthy applicants too poor to pay. It is full and the requests for its care from indigent habitues will tax its resources for months to come. Of these requests thus far, the Medical Director informs us that thirty per cent. have been from physicians. This fact proves our opening assertion, and fully emphasizes the need of such a resort. To care for these an endowment of $60,000 is now being secured, the income from which will be devoted wholly to this purpose. They receive the same care and attention as the other cases and the fact that they are free patients is known only to the Medical Director.

The Board of Directors comprises well known physicians, clergymen and others in Brooklyn and New York and its five consultants are all eminent in their special fields.

Subscriptions to the endowment fund, none of which will be called for until the entire amount is subscribed, are solicited. We commend this good project to every doctor in the land, for his generosity will go to aid a poor but worthy brother in distress. Donations may be sent to the editor of this journal and will be duly acknowledged or to the Medical Director of the Brooklyn Home, Dr. J. B. Mattison.

CORRESPONDENCE.

A CASE OF MONSTROSITY.

ED. MEDICAL & SURGICAL REPORTER :—

I delivered on the 13th inst. a case of monstrosity of the anencephalia kind which is worthy of being put on record.

A multipara aged, 19 years, second child. There was none of the upper cranial bones present nor any development of the brain. The two parietal, frontal and occipital bones were absent and with no sign of development of their centers. There was also a complication of spina bifida of the upper part of the cervical vertebra to the extent of one inch. It lived about fifteen minutes and was able to move around. It did not or could not cry. The lower part of face and body was perfectly developed and weighed about 7½ lbs.

The woman had a fall during her first month of pregnancy which may have been the cause.

Her labors were always complicated with too much liquor amnii, the last time about two gallons. Yours truly,

DR. H. C. W. SHOWALTER.
New Holland, Pa.

PERISCOPE.

THERAPEUTICS.

EUPHORIN.

Dr. Sansoni, in the *Journal de Méd. de Paris*, May 17, 1891, is said to have employed euphorin as an antithermic, antiseptic, antithæumatic and sometimes also as an analgesic.

As an antithermic Sansoni gives the drug in powder form, either in capsules or dissolved in a glass of wine. The dose varied from 0·50 gramme to 1·50 grammes daily. He has used the drug in many febrile diseases, both acute and chronic, including typhoid fever, pneumonia, phthisis, acute rheumatism, etc. A lowering of temperature takes place rapidly and lasts for about five or seven hours. The lowest point is reached in three hours. It is frequently preceded by a chill. After exhibition of the drug the skin becomes slightly red in color and then breaks out in a profuse perspiration.

It is a fact worthy of comment, that weak subjects endure the drug better than vigorous ones; in the latter the temperature not frequently falling below normal. But in these cases the patient experiences a feeling of well-being or light-heartedness, from which symptom the drug has received its name. In patients under 15 years of age, it is not well to give more than 0·5 gramme within twenty-four hours. Indeed, as a rule, Sansoni advises that initially the drug should not be given in doses larger than 0·1 gramme. The reduction of temperature is occasioned by dilation of the peripheral blood-vessels.

In order to obtain an antirheumatic action, euphorin must be given in larger doses than when using the drug as an antipyretic. At least 1 to 2 grammes must be given within twenty-four hours, and the action is better when large single doses are given than repeated small doses. In chronic rheumatism larger doses are required than in acute rheumatism. In the latter the drug's action is both rapid and effective, the pain and swelling quickly disappear and the temperature drops. In some cases of chronic rheumatism, of a stubborn character, in which all other remedies (including antipyrin and the salicylates) had been used without avail, the action of euphorin was excellent.

As an analgesic the drug is of a special value in orchitis; less in sciatica, trigeminal neuralgia, the lacinating pains of tubes; and with scarcely any action in intercostal neuralgia and migraine. The dose should be from 1 to 2 grammes daily.

Euphorin in powder form is an excellent antiseptic, and will be found of great value in the treatment of indolent ulcers, and chronic ophthalmia. In a few days the diseased surface will assume a healthy appearance, suppuration will cease, and healing will be rapid. The application of euphorine powder will occasion a little pain.

A CASE OF POISONING FROM THE EXTERNAL USE OF TOBACCO.

Dr. Aucké reports the following curious and interesting case to the *Wiener Medizinische Presse*, July 12, 1891. The patient was a man suffering from pediculi pubis. He took 200 grammes of tobacco and boiled it down in two litres of water, and then proceeded to "rub in" the mixture over his entire body. After this performance he did not wipe himself off, but sat in the wind and dried. This was done in the morning, and at about half-past one in the afternoon he repeated the experiment. At three o'clock he was suddenly seized with violent nausea and dizziness; his face grew dark, cold perspiration streamed from his body, which

assumed an extreme pallor; and his hands and feet trembled. The patient felt as though intoxicated, and seemed to be looking through a fog, being unable to distinguish the contour of any object. His pupils were enlarged, but re-acted to the light. He could hear well, but said he felt as though cotton were stuffed in his ears. Vomiting occurred from time to time. Besides this, the heart's action was much slower than normal, and the radial pulse, small, thready, and scarcely perceptible.

These conditions lasted for about three hours, after which they gradually abated. The next day the patient only complained of a severe headache, which a long sleep, however, relieved.

This case proves that tobacco used externally can give rise to the same toxic symptoms as when taken internally.

The reporter of the case fails to state whether the pediculi were affected or not.

FLUID EXTRACT OF HYDRASTIS CANADENSIS FOR THE NIGHT-SWEATS OF PHTHISIS.

Dr. Cruse, of Curlands, reports to the *Medicinische Neuigkeiten*, July 11, 1891 that while giving the fluid extract of hydrastis canadensis for pulmonary and renal hæmorrhages, the existing night-sweats in the patients treated simultaneously disappeared. This was very markedly the case in the last stages of phthisis. In one case of phthisis accompanied by night-sweats, which although primarily controllable by atropin, agaracin, etc., but which finally remained unimproved by any treatment, the fluid extract of hydrastis was given with very beneficial results. Dr. Cruse gave thirty drops of the fluid extract every evening. Later, however, he discontinued the drug but the night-sweats had not reappeared up to the time of his making the report (over three weeks). Experimenting further, Dr. Cruse found the remedy to be both prompt and efficacious in all cases of this kind. The initial dose was always thirty drops, every evening, which was increased if indicated.

ARISTOL IN DISEASES OF THE EAR AND NOSE.

Professor K. Burkner, of the Göttingen University Clinic for Diseases of the Ear, states in the *Berlin Klin. Woch.* that aristol was so warmly recommended to him as an antiseptic and a cicatrisant, that he felt impelled to institute extended trials of it in Polyclinic and in practice, for patients suffering from diseases of the ear and nose. Rohrer was the first to announce the results obtained by the use of aristol in ear diseases. He used it in acute and subacute, middle ear inflammations, by insufflation, after drying the cavity. There resulted a rapid decrease of secretion and tumefaction, and an early healing of the perforation. Aristol was quite as serviceable in otitis externa and ozœna. Rohrer reports twenty cases in which the effect of aristol was better than that of the usual remedies, especially boric acid, iodoform and iodol. Pirii, in 182 cases of rhinitis ulcerosa, ozœna obtained very good results from the use of aristol in powder, and aristol ointment. Massini obtained excellent results in fœtid rhinitis by the use of aristolized tampons.

Prof. Burkner has employed aristol as a powder and as an ointment, and has also used it intimately mixed with glycerine. In eight of his cases the suppuration was promptly removed. In fourteen cases the result was gained, but not so rapidly. In ten cases there was some increase of secretion.

Aristol proved to be exceedingly valuable —as also stated by Szenes—in determining the formation of granulations in the tympanic cavity, or auditory canal. Of twenty-two cases (of which a portion had been treated by lunar caustic with little benefit) thirteen showed under aristol, a very rapid improvement. Within a few days the proliforations had completely, or very considerably, dried up. In six cases there was a somewhat less marked improvement. In three cases of otitis diffusa externa, with suppuration, the condition yielded quickly to treatment by aristol.

Prof. Burkner also obtained very satisfactory results from the use of aristol in nasal diseases. He tested it in twenty-six cases, of which three were nasal syphilis, fifteen non-syphilitic ozœna, and eight were cases of granulative formations.

The effect of aristol in a large majority of the above cases was really surprising. Headache occurred very rarely, and lachrymation was insignificant as compared with what generally follows other remedies used in the form of powder.

After the first treatment by aristol the fetor often disappears at once for twenty-four hours. On longer treatment the fetor vanishes for days at a time, and a cure is finally obtained. The appearance of the mucus membrane quickly improves on the

atrophic surfaces, as well as in their neighborhood, when the surrounding tissue is hypertrophied.

Ulcerous conditions of the syphilitic origin, showed a remarkable tendency to heal after a very short use of aristol. This remedy is, in these cases, second to none of those usually employed.

As in ear cases, so also in nasal cases, the proliferations of granulation tissue were very rapidly improved. In many of his cases the granulations were permanently removed by insufflation of aristol, or by tampons impregnated with that preparation. He noted that aristol excited a less considerable hypersecretion than other remedies, such for instance as iodoform.

For affection of the nose, aristol constitutes a noteworthy enrichment of our treasury of therapeutic agents; and he also recommends its use in aural therapy, in which it should receive a very entended trial.

ACTION OF ALOIN.

Professor Meyer has chemically and physiologically examined aloin obtained from Barbadoes, Curaçoa, and Natal aloes (*Archiv. f. expt. Path.*, xxviii, Heft 3 and 4, 1891). Barbadoes and Curaçoa aloes yield an identical aloin, the former contains about 10 per cent., the latter about 16 per cent. It has the formula C_{16} H_{16} O_7, is in yellowish white acicular crystals, soluble in hot water and alcohol, much less so in acetic ether, and only in traces in chloroform, ether and benzol. Natal aloes yield about 14 per cent. of a different aloin, having the formula C_{24} H_{26} O_{10}, scarcely soluble even in hot water, soluble in 70 parts of boiling alcohol, very soluble in caustic soda, from which it is precipitated unchanged by acids. In experiments on animals and man the aloin was given *per os* and subcutaneously. For subcutaneous administration a solution in formamide was used—water may also be used for Barbadoes aloin, but the solution is more liable to decompose; the solution has a neutral reaction, and after injection causes burning pain for a few minutes but otherwise has no evil effects. The aloin can be detected in the fæces and urine by tests which are given at length and which are extremely delicate. The experiments showed that aloin from Barbadoes and Curaçoa aloes acted with certainty as a purgative, whether given by the mouth or subcutaneously. The dose in both cases is about the same, which is explained by the fact that aloin, when given hypodermically, is excreted from the blood chiefly into the bowel, only a mere trace or none being found in the urine. In man, dogs, and cats there is no albuminuria after subcutaneous injection, but in rabbits—in which animals aloes does not cause purgation—subcutaneous administration is always followed by inflammation of the kidneys, albuminuria and death. Its purgative action is as slow when it is given hypodermically as it is *per os*. The resin left after extraction of the alion from aloes is also purgative. Natal aloin was active in dogs and cats only after very large doses; but if an alkali were added to it—so as presumably to decompose it—its activity was greatly increased. By subcutaneous injection it was always active. In man, on an ordinary mixed diet, given alone or with an alkali, it had very little purgative effect, but in man fed on an exclusively animal diet, it was much more active. The reason probably is that in the latter case the putrefactive processes in the intestine are much more marked, and the aloin is decomposed into a more active substance. All the experiments seem to point to the conclusion that aloin itself is not an active purgative, but that it becomes gradually decomposed in the intestine into a more active body, and hence the slowness of its action.

—*Brit. Med. Jour.*

THE TREATMENT OF HÆMOPTYSIS.

In a paper published in the *Zeitschrift fur Therapie* for April I, 1891, Prof. Nothnagel calls attention to the fact that the most essential feature in the treatment of hæmorrhage from the lungs is that the patient should be kept absolutely quiet, should not be allowed to speak, the room should be kept at a moderate temperature, and he should eat nothing warm, and his food should be of the most readily digestible character, cold milk being preferable to anything else; and, in fact, Prof. Nothnagel advises that for two days the diet shall be confined solely to cold milk. It used to be taught that coughing was of assistance in removing the blood from the bronchi, but this is now recognized as being an extremely hurtful teaching, and the first attention should be directed towards suppressing coughing, and for this purpose morphine is the chief remedy. When the hæmorrhage is only moderately severe, nothing further need be given to the patient than morphine; but when, as occurs in many cases, the hæmorrhage does not spontaneously cease, then other remedies have to be given.

At first Prof. Nothnagel calls attention to

the remedies which ought not to be given, remedies which have been frequently recommended, and which yet may produce most disastrous effects. First of all in this connection he calls attention to the sesquichloride of iron. This as is readily comprehensible, is only of use as hæmostatic in external hæmorrhages, and then likewise only when those hæmorrhages come from capillary vessels. Even in the hæmorrhage which may follow the extraction of a tooth, it must be used with the greatest care. As is well known, this remedy causes coagulation of the blood, and so leads to the formation of a thrombus, while its constricting action on the blood-vessels is so slight as not to be worth attention. When given internally, even if it is absorbed, which is extremely doubtful, it must form other combinations, and then will only produce the action of any other iron preparation which evidently would lead to an increase of the bleeding; and it is an old rule, but a good one, that individuals with a hæmorrhagic tendency must be very cautious in the use of iron preparations. As a consequence, then, the internal use of the solution of sesquichloride of iron is neither theoretically nor practically of the slightest use. The same remarks apply to tannic acid and alum. These remedies only serve to constrict the blood-vessels when applied in dilute solutions. So also inhalations of all kinds should be strictly prohibited on account of the more vigorous respiration which this mode of treatment entails, and the consequent danger of increasing the hæmorrhage instead of diminishing it. When, however, a violent hæmoptysis is to be treated, two substances are named, which may be of great service. The first of these is ergotin, which acts on the unstriped muscular fibre of the blood-vessels, and which may be given both internally and subcutaneously; the second remedy is the acetate of lead, which may be given in doses of from $\frac{1}{2}$ to $\frac{3}{4}$ grain. There is still another remedy which might be employed with some prospect of success, although Nothnagel states that he has as yet had no experience with it, and that is *Hydrastis Canadensis*. Atropine also, in subcutaneous injections of $\frac{1}{64}$ grain, has likewise been claimed to do good. As to the use of common salt, given in teaspoonful doses, it is not clear as to whether the arrest of hæmorrhage, so frequently reported to follow its employment, are coincidences or consequences of the treatment. At any rate, it can do no harm, and may do good, when nothing else is obtainable. As regards the application of cold externally, Nothnagel is very doubtful as to its value; for, in the first place, is is very uncertain as to whether the cold either directly or reflexly will succeed in producing vascular contraction at the affected part; and in the second place, the application of cold to the surface of the thorax produces direct coughing, and coughing is certainly much more dangerous than the possible constricting value of a cold application.

Finally, Nothnagel alludes to the heroic measure of bleeding from a vein to arrest hæmorrhage from the lungs, a proposition based upon the observation that a violent hæmorrhage in leading to syncope often causes the arrest of bleeding. Of course such a procedure as bleeding for a hæmorrhage from the lungs can be dismissed without discussion.—*Ther. Gaz.*

APHORISMS IN MEDICAL EMERGENCIES.

Accidents in Giving Anæsthetics.—Tincture of digitalis hypodermically; draw out the tongue, and see that respiration is not mechanically impeded; invert the patient quickly and temporarily; use forced respiration promptly; apply external warmth and stimulation to the surface; avoid the exhibition of alcohol.

Angina Pectoris.—Inhalation of chloroform, or of a few drops of nitrite of amyl; $\frac{1}{100}$ grain of nitro-glycerine, internally; placing the feet in hot water; mustard to the pecordial region; dry cup between the shoulders; hypodermic injections of morphine and atropine; administration of stimulant and anodynes.

Apoplexy.—Elevate head and shoulders; if pulse is moderately strong and the brain congested, bleed from the arm freely, sixteen ounces or more; elaterine (gr. $\frac{1}{6}$) or croton oil, two drops in a drachm of sweet oil or glycerine; cold to the head by means of an ice-bag.

Asphyxia.—In drowning, hold the patient's head downward for a few seconds. In hanging or choking, bleed from the jugular. If there is obstruction to passage of air through mouth or nose, open trachea. Artificial respiration at once, and to be continued. Friction, warmth, warm bath (100°), ammonia to nostrils, galvanizing of phenic nerve.

Asthma, Spasmodic.—Hypodermic injection of atropine into the nape of neck; inhalation of smoke of stramonium leaves; fluid extract of nux vomica, internally, alcohol, ether, chloral, opium; inhalation of chloroform cautiously administered.

Colic, Gall.—Morphine hypodermically;

inhalations of chloroform; hot application to the abdomen.

Coma.—Dark room, head high and cool; head shaved; low diet; croton oil; if due to compression, antiseptic trephining; if due to uræmia, pilocarpine and hot baths.

Heat-stroke.—Remove clothing, sprinkle with water, cold cloths to head, hot cloths to feet; antipyrin; bleeding in robust subjects. After temperature is reduced give alcohol and diffusible stimulants, hypodermically if necessary.

Pulmonary Hæmorrhage.—If severe, raise the thorax, administer opiate; gallic acid fifteen grains every fifteen minutes; ergotin five to ten grains hypodermically two to three times daily; ice-bags to the chest; as a last resort a ligature may be thrown around the larger limbs. (Tyson.)

Hæmorrhage from Stomach or Bowels.—Tannic acid ten to fifteen grains if due to capillary oozing. If from typhoid fever or ulcer of the stomach, treat as for pulmonary hæmorrhage.

Hiccough.—Acid drinks, cold douches, ether or chloroform internally, externally, or by inhalation; musk, opium, antispasmodics.

Hysteria.—Inhalations of ether or chloroform for the spasms. If this is contra-indicated, give mono-bromide of camphor, musk, valerian, assafœtida, the bromides. In convulsive seizures, morphine and atropine hypodermically.

Shock.—Warmth; hot water bottle to feet, flanks and epigastrium; warm effusion to head; horizontal position; frictions, stimulants, brandy, ammonia, galvanism to precordia.

Strangury.—Vesical, hypodermic injection of morphine, to be followed by other remedies; rectal enemata of starch water and laudanum followed by a hot sitz bath.—*E. J. Kempf., M. D., in Am. Pract. and Nems.*

THE PHARMACOLOGY OF ASPARAGUS.

The influence of the active principles of asparagus on the renal function does not appear to have been very clearly made out, and although for some reason or another a general impression prevails in favor of its ingestion being followed by a diuretic effect; this view is not based on reliable data. Indeed, there are grounds for believing that it not uncommonly exercises a disturbing influence on the renal functions, causing in some instances a notable decrease in the amount of urine excreted. It is very improbable that any injurious effect is produced on the healthy organism, or this succulent vegetable would not have become a general favorite. As, however, it may possibly give rise to undesirable symptoms in particular cases, it is as well that the profession should be made acquainted with the real nature of its physiological action, and we shall look to our scientific pharmacologists for some information on this point.—*Med. Press.*

MEDICINE.

CHOREA—ITS PATHOLOGY AND TREATMENT.

Chorea is a neurosis probably produced by irritation in the motor centers of the cerebrum, through which the influence of the will over motion is disturbed. In isolated cases it may be caused by capillary emboli or other changes in the lenticular nucleus.

Psychical influences or anæmia, perhaps by the vasomotor disturbance of the motor centers which they occasion, are the most frequent causes of chorea.

Chorea frequently follows rheumatism. Most probably the same irritant which produces rheumatism may, by its effects on the motor centers, bring about chorea.

The frequent coincidence of heart affections and chorea is largely due to the etiological connection of both of these diseases with rheumatism. Still, it is possible that heart affections may give rise to vasomotor disturbances in the motor areas, and that recent endocarditis may produce capillary emboli in the same locality, both of which phenomena might readily cause chorea.

The therapeutics recommended by different authorities vary according to the view which they take of the etiology. Thus some recommend chiefly nervines and tonics; others recommend anti-rheumatics; while still others lay the greatest stress on the treatment of such heart affections as may be present.

I shall speak only of those medicines which are shown to be efficacious by the unanimous testimony of a large number of clinical reports. This claim can in reality be substantiated only for arsenic and antipyrin. There can be no doubt that these two drugs do certainly shorten and ameliorate the course of chorea. They must, however, be given in sufficiently large doses.

As less important, though still useful in the treatment of chorea, I wish to recommend iron for those cases in which anæmia exists, and chloral hydrate for those in

which there are great restlessness and insomnia.

So much for the medical treatment of chorea. I will now consider the physical treatment. Some authorities recommend absolute mental and physical quietude for choreic patients. Others recommend gymnastics as a cure, claiming that it improves the general nutrition as well as the nutrition of the muscles, and that furthermore it tends to bring the muscles back under the control of the will. My own experience teaches me that all mental exertion is to be avoided, likewise all bodily exertion, except such as is conducted strictly under the direction of the physician. Certain movements must be made before the patient, and he must imitate them, at the same time watching carefully the execution of his movements. From simple we must gradually go to more complex exercises, always carefully avoiding fatigue. Thus methodical gymnastics will be found to aid greatly other treatment.

Massage and electricity do not seem capable of accomplishing much in the management of chorea.

As to balneo- and hydro-therapy in chorea, I would say that I do not think it well in the acute stage to deprive patients of their home and comforts and send them to resorts.

After the acute stage has passed cold water treatment in the shape of baths or otherwise may be a useful adjuvant in suitable cases. The patient's peculiarities must be regarded, his manner of reacting and his antipathy for cold temperatures should be taken into account. Never should he be excited. Shower baths are very seldom applicable. Warm or lukewarm baths are sometimes preferable to cold ones. Especially in cases complicated with rheumatism and heart disease should cold water be abhorred. When the heart trouble is acute, no baths at all should be employed.—Dr. Groedel, in *Deut. Med. Zeit.*—*Weekly Med. Rev.*

A RARE CASE OF HEPATIC ABSCESS.

Dr. Joseph Gabriel says: On Aug. 29th, 1890, I was called to see Sheik Khalee, aged thirty-two, a native of Hayoum, in Upper Egypt. He was suffering from pain in the right side; his face was pale; tongue coated white; pulse 100; temperature 102°, with irregular fits of chill; respiration short and rapid. According to the patient's statement his illness was of one month's duration, during which he was getting worse every day. On inquiry regarding his habits and his previous illness, he said that he had been in the habit of drinking intoxicating liquors, which he stopped five years ago; a year before this date he suffered from intermittent fever, and he did not have dysentery. Physical examination showed that on percussion the pain was increased, and the area of liver dulness was larger than usual, but I could not detect any fluctuation; urine of natural color. I had no doubt that my patient was suffering from inflammation of the liver, and probably commencing abscess. I gave him a solution of diluted nitro-muriatic acid, sulphate of quinine, and tincture of rhubard, and applied a blister on his right side. On Sept. 3rd I again visited the patient, and found him very little better. He complained of pain in the right shoulder; his bowels were irregular. I told him to continue the medicine, and perscribed in addition akaline mineral waters. On the 10th his temperature was almost normal; pain considerably less, but he looked very weak still, and had no appetite. I told him to continue taking the mineral waters, and applied a second blister on his side. On the 20th I visited him again, and found him walking in the garden. Upon examination I found everything normal; he was apparently cured, and enjoyed good health during two months, at the end of which he was suddenly attacked by dyspnœa and a severe cough, and expectorated a material like chocolate in color. I examined the expectoration, and found it composed of pus cells and broken-down liver tissue. I ordered him a stimulant, tonic medicine, nourishing food, and left the case to nature. He still expectorates, and up to the present time he expectorated about 400 ounces, but has strength sufficient to go about and fulfil his ordinary duties.—*Lancet.*

SURGERY.

PHAGOCYTES.

It is a matter of common observation in surgery that solid materials in contact with living tissue undergo erosion and diminution of bulk, and, under favorable circumstances, altogether disappear. The most familiar example of this occurrence is necrosed bone in contact with granulations. The worm-eaten appearance of the sequestrum, its separation from the living bone, its diminution of bulk, and in some cases its total disappearance without exfoliation, indicate that it has

been eaten away. This process can best be watched in cases of denuded skull in which the growth of granulations through the outer plate and the coalescence of these and the gradual absorption of the intervening white bone can be clearly seen. Ivory pegs, catgut stitches and drains, decalcified tubes are capable of being partially or wholly consumed in the same way. It is not a case of disintegration by maceration and subsequent absorption of the molecules. The worm-eaten aspect of the fragments negative this idea, as well as the fact that when the material is bathed in pus and is not in contact with granulations it does not undergo diminution of bulk. The absorption of particles of pigment from the skin and the conveyance of these particles to the interior of lymphatic glands by the cells, in which the coloring matter can be seen, is another instance in point. The efficient agents in this process of erosion are undoubtedly leucocytes, which carry the foreign material inwards for excretion, or outwards, in the process of suppuration, for emission. This remarkable and salutary property of wandering and amœboid cells in the animal organism has acquired a new and singularly striking interest through the researches of Dr. Elias Metschnikoff, who has demonstrated that the amœboid cells of the body, fixed and free, possess the property of enclosing microbes in their protoplasm, and digesting or disintegrating them. This is a novel illustration of the exercise of the *vis medicatrix naturæ*, and has led its discoverer to enunciate a new theory regarding natural and acquired immunity against diseases arising from the introduction into the body of pathogenic organisms. The process of prehension of micro-organisms by the pseudopodia of phagocytes is, according to this theory, denominated phagocytosis. In some cases the cells manifest a quick attraction for the microbes and rapidly envelope them; in other cases they display a repulsion. These attitudes are termed *positive chemiotaxis* and *negative chemiotaxis*. The exercise of either of these depends on the peculiarities of the animal and the chemical qualities of the material. Malignancy implies negative chemiotaxis and *vicé versa*, and negative can be converted into positive chemiotaxis by preparation of the organism by means of protective inoculation. Immunity may be natural when the animal is, as it is called, refractory, or acquired when an animal naturally susceptible is rendered refractory by vaccination. In both cases immunity is coincident with, if not caused by, the existence of strong positive chemiotaxis. This theory presents us with a struggle between two contending elements—the phagocytes on the one hand and the microphytes on the other. Victory on one side means immunity or recovery from disease; victory on the other means illness or death. The theory is an exceedingly plausible and fascinating one, and is applicable to the ordinary phenomena of inflammation as well as to the phenomena of microbic infection. A very lucid statement of it will be found in the *British Medical Journal* of the 31st of January in a translation of a lecture delivered by Dr. Metschnikoff himself at the Pasteur Institute. In this lecture the facts on which the theory rests are clearly set forth, the bearing of these on the question of immunity very intelligently discussed, and sundry theories which would explain immunity in other ways criticised with much ability and force. We strongly commend this lecture to the attention of those who may desire fuller information on this most interesting and important topic.—*Indiana Med. Gaz.*

HOW TO KEEP NEEDLES FROM RUSTING.

Dr. Robert H. M. Dawbarn, writes in the *N. Y. Med. Jour.:* It would be an interesting point to determine how many of your readers are agreed regarding the best way of keeping their various surgical goods and chattels ready for instant use. In talking with other surgeons I find many opinions about it.

As to needles, for instance. I think the majority, after sterilizing them by heat, try to keep them dry. Dry sterilizing at the usual temperature is apt to injure their temper and cause subsequent bending during use; boiling or steam, to induce specks of rust. Rust, too, results from occasional subsequent exposure to air; and if cotton or cloth is used, this attracts moisture. Should a film of vaseline or oil be applied as a protective, this causes dust to cling, and requires fresh cleansing before use. Glycerin I have tried and found wanting. In it, hygroscopic as it is, the needles do not remain entirely untarnished. They finally turn black.

For the past year I have been pleased with the results of a new plan—new to me, that is, though very probably not to others. This is simply to keep my needles in alcohol. For extreme safety against rust, I use absolute alcohol; but the commercial article would probably be efficient. At least, some needles which I have kept in common

alcohol for a month as an experiment are as bright as ever.

Upon buying the needles, I immerse them in benzine to remove grease. Then, after running them through a towel, I plunge the point (a cutting-edge Hagedorn) into a bit of cork of the size of a pea—to avoid dulling from jolting—and finally, with their corks, they are put and kept in a wide-mouthed, glass-stoppered bottle filled with absolute alcohol.

After use, I sew through a thick, wet, soapy towel repeatedly, cleanse the eye with a thread, immerse in benzine, and finally replace in the alcohol. This is certainly an efficient disinfectant, besides being an excellent protector against rust.

By the by, I long ago gave up using (save in bowel work) any other than Hagedorn *self-threading* needles, which are a decided comfort, and, when properly made, do not cut the thread.

GYNÆCOLOGY.

ACCIDENTS RESULTING FROM INTRA-UTERINE CAUTERIZATION WITH CANQUOIN'S PASTE.

Pichevin (*Nouvelles Archives d' Obstét. et de Gynécol.*, No. 2, 1891) concludes that the time has come to refute the arguments which have been advanced to legitimize the employment of a therapeutic measure which theory condemns in advance. He feels that it is necessary to furnish some facts, the eloquence of which is such that men of good faith and physicians desirous of the interest of their patients may renounce positively a preceeding which, as someone has written, is "a manifestation of atavism." Many who have employed caustics in the uterine cavity at some time in their practice are strongly opposed to this method of treatment to-day. Avan spoke of cauterizations of the cervix with the paste of the chloride of zinc, but was far from recommending this treatment. Bennet makes mention of the retractions which he had observed in women whose cervical canal had been cauterized. Scanzoni was strongly opposed to the employment of the caustic of Filhos, and Nonat reports great constriction of the utero-vaginal orifice following the use of Vienna paste. Bernutz and Goupil, after treating a young woman suffering from metritis by Vienna paste, reported an occlusion of the neck with menstrual retention. Emmet, Schröder, Martin, Mundè and others, all record themselves as opposed to cervical and intra-uterine cauterizations.

The advocates of the treatment by cauterization are strong in their opposition to the method of treatment by curetting the uterus. They claim that the latter is an operation which necessitates prolonged and rigid antiseptic precautions; that it places the surgeon under the necessity of making a previous dilatation; that it demands a chloroformization, which is "always formidable;" that it gives rise to a loss of blood which is at times very great; that it is a rather grave and complex operation; that it compels the surgeon to practice forcible depression of the uterus; that it is not successful when the uterus is retro-displaced; that it does not give better results than the other procedures which have been advanced for the cure of endometritis; and, finally, that it causes atresia. In answer to these propositions, Pichevin, declares that *curage* of the uterus has been adopted by the immense majority of surgeons. Antisepsis, he says, is beyond doubt indispensable before, during and after the operation; slight dilatation is useful, but not indispensable. As for chloroformization, it may be omitted; but for the sake of the patient it has become the custom to resort to anæsthetization. The quantity of blood which escapes during and after the operation is absolutely insignificant. Moreover, hæmorrhage—when it exists before the intervention—is arrested as by enchantment in the very great majority of cases. The abrasion of the uterine mucosa with a dull or cutting curette is not a complex operation. There is nothing more simple. Forcible depression of the uterus is not necessary. It suffices to fix the cervix with the aid of a small forceps. When the uterus is retro-displaced, the metritis will be cured under the influence of the curette, but it is necessary to replace the organ in its normal position. The abrasion of the uterine mucosa is not an infallible method of treatment for endometritis, but no procedure can be compared to it. As to subsequent atresia, Pichevin has never observed it in his practice.

On the other hand, the apostles of intra-uterine cauterization claim the following advantages for Canquoin's paste in the treatment of endometritis:

1. It is unnecessary to perform minute and prolonged antisepsis.

2. It is unnecessary to practice a previous dilatation.

3. It is unnecessary to anæsthetize the patient. The introduction of the stick of Canquoin does not occasion any pain. As

to consecutive pains, they are rare, ordinarily but slightly marked, and of short duration.

4. The treatment does not necessitate a long rest. The patient is cured at the end of some days.

5. There is no hæmorrhage produced by the cauterization.

6. Atresia does not result, or if it is noticed it is an exceptional occurrence. In any case, the cervical constriction is not special to this mode of treatment.

7. The intra-uterine cauterization is efficacious. The cure obtained from the stick or pencil is real and durable.

8. The innocuous nature of this intervention is undeniable.

9. The introduction of the stick or pencil of chloride of zinc into the uterus is simple and easy.

To these propositions Pichevin offers the following refutations: While Polaillon strongly advocates the employment of intra-uterine caustics, he admits that antiseptic injections are indispensable while the scar is forming and eliminating itself, and during all the time necessary for the cure. Dumontpallier likewise says that the day of the operation being determined, frequent vaginal injections, about three *per diem*, should be made before the operation, employing a solution of sublimate 1 to 2000 or 1 to 3000.

Grandmaison and Bock recommend antiseptic washes for the external genitalia, with vaginal and intra-uterine injections of sublimate while the eschar is being cast off. Bock injects into the uterus tincture of iodine, perchloride of iron, or silver nitrate. It will thus be seen that the advocates of this method themselves largely employ antisepsis. As to the previous dilatation, Polaillon recognizes the fact that in certain cases it is necessary to introduce a laminary tent, or to perform a slight dilatation with a uterine dilator. Grandmaison and Bock have also been compelled to dilate. Several of the followers of this method of treatment have testified to the severe pain which has been produced by the caustic agent. Reynier noticed that injections of morphine failed to relieve these sufferings. In ten operations Dr. Jacob has, with but one exception, noted very severe pains attendant upon cauterization. As far as rapidity of cure is concerned, the statements that the patients who have undergone cauterization are discharged in a few days cured are gravely erroneous. Bock, the Belgian defender of the system says: "The time necessary for a cure will be from three weeks to three months." Jacobs, Polaillon and Batuaud report cases of violent hæmorrhage following the separation of the eschar, thus confuting the claim of the adherents of cauterization as to the entire absence of bleeding. The efficacy of cauterization has not been demonstrated by the reports which have been published. In fifteen operations Deletrez reports but three cures, while Jacobs has ten relapses in ten cases. Neither is the method of treatment entirely free from unfortunate complications. In one hundred observations Dumontpallier reports four peri-uterine complications (two cases of pelvic peritonitis and two abscesses of the broad ligament). Following the application of caustics to the uterus, the state of the menstruation has been in several instances altered. Dysmenorrhœa and irregular menstruation, with increase of flow, has been noted by different operators.—*Med. News.*

CONSTIPATION AND ITS RELATION TO PELVIC DISEASES IN WOMEN.

Root (*Southern Medical Record*, May, 1891) calls attention to constipation as a frequent factor in pelvic diseases of women. The habit of constipation is largely due to carelessness, especially in childhood. In the adult female, constipation is very frequent, and many of its symptoms point to pelvic disease; pain in the back, pain in the top and back of the head, a feeling of weight in the limbs, dysmenorrhœa and leucorrhœa, subjecting the patient to local treatment, when changes in the modes of life, with relief of constipation, would restore health. It is also very evident that this disease acts as a most active factor in the production of pelvic disease in women; for where endocervicitis and even retroversion exist, rapid improvement is made as soon as constipation is relieved. Pelvic disease results from constipation through pressure and keeping up a constant condition of sluggishness of the pelvic circulation, amounling practically to a chronic congestion. Many cases of pelvic disease can be cured by the proper regulation of the bowels, and he cites cases in proof of this statement.—*Univ. Med. Mag.*

OBSTETRICS.

TREATMENT OF RUPTURE OF THE UTERUS.

In considering the question of laparotomy Leopold *Archiv f. Gyn.* asks us to remember that hæmorrhage which may be insignificant

externally, may be considerable and dangerous within. After laparotomy, hæmorrhage being controlled and the abdominal cavity cleansed suture the rupture, if possible, or plug uterus and vagina with iodoform wick, and draw another through the tear and lower angle of the abdominal wound. Subsequent treatment according to the usual rules. In rupture of the uterus the child should be delivered so as to cause the least risk to the mother; not by turning, as that would extend the tear, but by perforation or embryotomy. If engaged in the lower pelvis, deliver manually or by the forceps. Laparotomy should alway be performed at once and under strict antiseptic precautions in cases where the child has escaped into the abdominal cavity. The danger to the mother increases strictly as to the time since rupture and the force used in attempting delivery, these factors leading to exhaustion and infection. The death of the child follows very soon after rupture. Although the mother may show great shock, if assistance is prompt and the hæmorrhage successfully controlled, the prognosis is good in the worst cases. Uterine rupture at the vesico, uterine fold is more frequent than is generally supposed. The hæmorrhage is not necessarily severe, and may be closed by forced antiflexion of the uterus by pressure and bandage, together with plugging the ruptured uterus and vagina with iodoform gauze.

MERTRITIS DISSECANS.

Dr. Höchstenbach (*Archiv f. Gynäk.*, vol. xxxvi, part. ii) describes a case where the first labor was lingering. The membranes were ruptured too early; the os was long in dilating. The forceps was applied to the head of the still living child before complete dilatation of the os. Four attempts at delivery failed. Sixteen hours later, the child was extracted, dead, with the forceps. A rent in the perineum was sewn up at once. *Post-partum* hæmorrhage set in, and the placenta was detached with the hand. The uterine cavity was washed out with an antiseptic lotion. Within an hour symptoms of septic infection set in. Stinking gases and pus escaped from the uterus, sloughs of vaginal mucus membrane were discharged, and a vesico-vaginal fistula formed. Metastatic pneumonia set in, and on the twenty-sixth day after birth a large slough, consisting of uterine and vaginal tissue, was expelled with free fœtid purulent discharge. The pyæmic symptoms passed off for awhile, the vagina and uterus becoming practically closed. A plastic operation was performed half a year later for relief of the fistula. Three months later the patient died of pyæmia. A necropsy was performed, and the former existence of metritis dissecans was authenticated. The uterus and vagina showed the effects of extreme cicatrical contraction. Extensive plugging of veins, metastatic abscesses in the left kidney and lung, and left hip-joint disease were also discovered. Dr. Höchstenbach has collected twelve cases of metritis dissecans; three proved fatal, two through sequelæ of infection, one from rupture of the thinned uterus during injection. This case is a warning to obstetricians; it shows how caution should be exercised in the management of injections, especially when there is much fœtid discharge. Diagnosis is easy as soon as the sloughs begin to escape. All the twelve cases could be traced to puerperal infection. One patient had typhoid, one syphilis; these constitutional diseases may have encouraged local septic infection. It is not certain whether the disease begins as primary necrosis of the uterine tissue, through plugging of its vessels with coagulum or germs, and subsequent demarcation by an inflammatory process, or as destruction of the uterine tissue by primary inflammation and free exudation.—*Brit. Med. Jour.*

VOMITING OF PREGNANCY.

Dr. Graily Hewitt has recently published a work on this subject, in which he reiterates his frequently-expressed views as to the causation of this distresssng symptom. He endorses the opinion of many authorities that the vomiting is a reflex act which starts from the neighborhood of the internal os, and he claims that the irritation arises from malposition of the uterus, causing compression at this part, and his treatment therefore consists chiefly in reposition of the displaced organ. —*Exchange.*

PÆDIATRICS.

STERILIZATION OF MILK.

Petri and Maassen (Arbeiten aus dem K. Gesundsheitamte, *Deutsche med. Zeitung*, No. 45) reports observations made upon 1,800 bottles of sterilized milk, 600 of these having been examined for bacteria. It is possible, as they found, to obtain by sterilization milk absolutely free from germ life. Several con-

ditions, however, bear upon this point. Firstly the composition of the milk at the time of sterilization, a permanent preparation being possible only when the milk is fresh and free from impurities; next, the time of sterilization; and lastly, the storing of the already sterilized milk in cool places. By sterilizing we destroy the pathogenic organisms of anthrax, cholera, typhoid, tuberculosis, diphtheria, erysipelas, suppuration, as well as the bacteria of blue milk, etc. The sterilized milk has a certain cooked taste, easily distinguished from fresh milk, but by no means unpalatable, so that, as a rule, it is readily taken.

Hesse (*Zeitsch. f. Hygiene*, same reference) has arrived at the following conclusions as a result of his work upon the question of sterilization:

1. Milk suitable for sterilization can only be obtained from healthy, dry-fed, and carefully tended cows.

2. All possible contamination of milk up to the time it is placed in the sterilizer is to be most carefully guarded against.

3. If possible, sterilization should be effected immediately after milking. If this cannot be done, the milk is to be at once cooled and maintained at a low temperature. Even then, not more than a few hours should elapse before sterilization.

4. To avoid the cracking of bottles in the sterilizer, the latter, filled to about four-fifths of their capacity, should be introduced into the sterilizer cold, and the temperature gradually brought up to the boiling point; or, what is preferable, first warmed with their contents and then subjected to the proper heat.

5. The milk is to be brought to the boiling point, the temperature being indicated by a thermometer penetrating into the interior of the apparatus. Once this degree is reached, the process is to be continued for an hour and three-quarters. Then the milk is truly sterilized. In bottles made of green or brown glass it will keep indefinitely. White glass bottles should be protected from the direct rays of light.

6. Every bottle should be tested, immediately before using, with reference to taste and odor.

It is believed safer for each family to sterilize its own supply for daily or weekly consumption, rather than to depend upon articles of commerce, which, being prepared in much larger quantities, are thereby also more liable to contamination or subsequent accidents.

Guérin has recently suggested, as a substitute for sterilization, freezing of the milk, in elastic reservoirs, so that it may be carried in blocks, like ice. Such milk, upon thawing, has the taste of fresh milk, can be churned, or boiled just as fresh milk can. It can be preserved for two or three weeks, if kept at a suitable temperature. The preparation, however, always requires the use of an ice machine and suitable non-conducting receptacles for milk, and is hardly as practicable as sterilization.—*Lancet and Clinic.*

CONVULSIONS AS A CAUSE OF CEREBRAL HÆMORRHAGE IN EARLY LIFE.

Ashby (*Practitioner*, June, 1891) refers to the difficulty of determining whether in those children who are hemiplegic, and who give a history of severe convulsions, these caused minute hæmorrhages which gave rise to the convulsions, or whether the convulsions and the hemiplegia were both caused by hæmorrhages. He is inclined to think that often the convulsions are the cause of the hæmorrhage, and he gives the following case to support this view: A child, twelve years old, was brought to the hospital suffering from right hemiplegia. The history given was that at the age of two years he had several severe convulsions attributed to indigestion; before these he was apparently quite healthy, but afterwards it was noticed that the right arm was useless, and he dragged the right leg. Until the age of ten he had many fits, but since then he has been free. He died of tuberculosis a few months after admission. The brain appeared healthy when examined externally, but on section several small old blood cysts were found in the neighborhood of the corpora striatata on both sides, but they were very much larger on the left side than the right. Dr. Ashby believes that at the age of two the convulsions gave rise to the hæmorrhages, and the paralysis supervened upon them, for there is nothing whatever to indicate that any thrombosis, embolism, or arteritis could have caused the hæmorrhages.—*Brit. Med. Jour.*

HYGIENE.

BORIC ACID, &c., AS FOOD PRESERVERS.

A few months ago a person who sold milk, which had been deprived of part of its cream, and which contained some boric acid, was heavily fined by a London magistrate. The fine was imposed, partly on account of the debasement, partly because of the pres-

ence of boric acid. This substance, with or without its sodium salt (borax), and salicylic acid are largely employed in the preservation of cream and other ready perishable articles of food. In some countries the nature of food-preservatives is inquired into by the authorities, and such of them as might be prejudicial to health are prohibited. In Berlin no preservative of any kind is allowed to be put into milk. In Holland salicylic acid as a preservative is interdicted, although previously it was largely used, especially in beer. In France, salicylic acid is not allowed to be used; and in Spain and Italy, preservatives other than alcohol are not permitted to be added to wines. In these countries, bisulphites are frequently used to keep beer from becoming sour, and the practice seems to have had some sort of official recognition by the Excise authorities. As to the effects of the continuous use of boric acid, borax, and salicylic acid upon health, opinion is divided, but the weight of it is against their use. The medicinal dose of boric acid is from 5 to 30 grains for an adult, and 2 or 3 grains for a child. From 5 to 12 grains of boric acid and mixtures of borates are added to a pint of milk; a child using a pint of milk would, therefore, take a big dose of the antiseptic. It may be that these bodies do not affect one's health when used in the proportions in which they are found in food; but it seems irrational to suppose that compounds which prevent the evolution of organisms, and arrest chemical changes in organic bodies, would have no influence upon the processes of digestion. The whole subject of the use of antiseptics in food ought to be carefully considered.—*Dublin Journ. Med. Sci.*

SPREADING DISEASE BY THE CLINICAL THERMOMETER.

An article in the *Medical Record*, May 16th, headed "Dentistry and Syphilis," reminds me of the thoughtless and filthy manner I have seen the clinical thermometer used by physicians, and that by physicians of good standing and undoubted ability. I cannot call your attention to any particular case that would demonstrate, without doubt, my views; but my conviction is sufficient to prompt me to make the assertion that disease is often conveyed by the clinical thermometer.

I have seen the thermometer used when the amount of mucus accumulated on it was so great as to make it almost difficult to see the register. The majority of practitioners wipe the instrument off with a handkerchief, towel, or even the bedclothing, and carefully place it away in a case prepared with a small amount of absorbent cotton in the bottom to prevent breaking, and, unintentionally, to preserve the germs from time to time, to be conveyed to the next unfortunate, who may be the first patient called upon.

I make it a rule to clean my thermometer every time it is used, whether I suspect any infectious disease or not, at the patient's residence. I use soap and water, and if no disinfectant is at hand, I use, on my arrival at my office, either boracic, carbolic, or corrosive sublimate solution, in order that I may use my thermometer with a clear conscience when it is again needed.—L. M. Powers, M. D., in the *Medical Record.*

TRANSMISSIBILITY OF SYPHILIS.

As published in his magnificent *Atlas of Venereal and Skin Diseases*, Prof. Morrow's conclusions in reference to the hereditary transmission of syphilis are:

1. A syphilitic man may beget a syphilitic child, the mother remaining exempt from all visible signs of the disease; the transmissive power of the father is, however, comparatively restricted.

2. A syphilitic woman may bring forth a syphilitic child, the father being perfectly healthy; the transmissive power of the mother is much more potent and pronounced, and of longer duration than that of the father. When both parents are syphilitic, or the mother alone, and the disease recently acquired, the infection of the fœtus is almost inevitable; the more recent the syphilis, the greater the probability of infection, and the graver the manifestation in the offspring.

3. While hereditary transmission is more certain when the parental syphilis is in full activity of manifestation, it may also be effected during a period of latency when no active symptoms are present.

4. Both parents may be healthy at the time of procreation, and the mother may contract syphilis during pregnancy, and infect her child in utero. Contamination of the fœtus during pregnancy is not probable if the maternal infection takes place after the seventh month of pregnancy.

MEDICAL CHEMISTRY.

CHLORAL-PHENOL AND PHENOL CAMPHOR.

Chloral has the property, when rubbed with certain bodies, such as camphor, of

forming therewith syrup liquids. With phenol (absolute carbolic acid) it also liquefies, and a preparation composed of equal parts of phenol and chloral is used in medicine for allaying toothache, as well as for its antiseptic properties. A recent study by Fabini, says the *Chemist and Druggist*, shows that chloral-phenol possesses the odor and taste of its constituents, and when applied to the skin produces inflammation and an eruption of small blisters. It is a colorless and clear liquid, having a sp. gr. at 20° C. of 1.289, so that it sinks in anhydous glycerin. It is soluble in alcohol, acetic acid, amyl-alcohol, chloroform, carbon bisulphide, and glycerin, as well as in ether when slightly warmed. It is only partially soluble in petroleum ether, and benzine only dissolves a little of the fluid, and what is dissolved is chloral phenol. Fabini tested the fluid thoroughly, with a view to determining whether it is a mechanical mixture, and it behaved in every way towards re-agents as carbolic acid does, while with sulphuric acid some of the chloral-phenol yielded, after twenty-four hours, a velvet-colored plaster-like mass, which consisted of meta-chloral and phenol-sulphonic acid. There seems to be no doubt, therefore, that chloral-phenol is a mixture.

This preparation should not be confounded with the phenol camphor devised by Cockrane (not campho-phénique), and made by mixing together 1 part of carbolic acid and 3 parts of camphor. After twenty-four hours this becomes a liquid, having a sp. gr. of .990. It is used with oil as an antiseptic. As a spray it may be applied to the skin to produce local-anæsthesia. It may be employed for disinfecting surgical instruments, and upon wool and gauze for wound dressing. It is soluble in alcohol, ether, and oils, but not in water or glycerin. Menthol, cocaine, salicylic acid, iodoform, chloral dydrate, and mercuric chloride are soluble in phenol camphor.—*Pharmaceutical Record*, June 11, 1891.

THE PRESENCE OF ALCOHOL IN COMMERCIAL ETHER.

If a clear mixture of 4.5 volumes of a saturated solution of potassium bicarbonate and 1 volume of a saturated solution of mercuric chloride is shaken up with commercial ether, the mixture becomes turbid in ten to twenty minutes, and a white, amorphous, precipitate separates out. If further quantities of ether are added, all the mercury is eliminated except traces, whilst the substance which reacted upon the ether is withdrawn from the mercurial solution.

The yellow or brown color imparted to commercial ether on the addition of potassium hydroxide is occasioned by alcohol.—*Arch. d. Pharm.* and *Chem. News.*

NEWS AND MISCELLANY.

MISSISSIPPI VALLEY MEDICAL ASSOCIATION.

The Mississippi Valley Medical Association will hold its seventeenth annual session at St. Louis, Wednesday, Thursday, and Friday, October 14, 15, 16, 1891. Reduced rates and an excellent programme will bring out a large attendance. The medical profession is respectfully invited. The officers are as follows: C. H. Hughes, M. D., 500 N. Jefferson Avenue, St. Louis; E. S. McKee, Secretary, 57 W. Seventh Street, Cincinnati, Ohio; I. N. Love, M. D., Chairman Committee of Arrangements, 501 N. Grand Avenue, St. Louis, Mo.

TRI-STATE MEDICAL ASSOCIATION.

The Third Annual Meeting of the Tri-State Medical Association will convene in Turner Hall, Chattanooga, Tenn., Tuesday, October 27th, 1891, and continue in session three days. Indications are that it will be one of the largest Medical meetings ever held in the South. Representative physicians from all sections will be present.

All who desire to read papers should send title to the Secretary of the Association before September 1st. In due time a circular will be issued giving a complete list of all papers and names of exhibitors who apply for space before October 1st.

W. L. Gahagan,
Sec'y of Executive Com.,
P. O. Box 542. Chattanooga, Tenn.

THE NUMBER OF TUBERCLE BACILLI IN PHTHISCAL SPUTUM.

Dr. E. H. F. Nuttall, of Johns Hopkins University, has shown that phthiscal patients expectorate from 250,000 to 4,000,000,000 bacilli in twenty-four hours. Taking the average of, we will say, 100,000,000 per day, the patient would expectorate 365,000,000,000 bacilli a year, and if he lives three years, the total number of micro-organisms ex-

pectorated during his illness would be 1,095-000,000,000. Or multiply the year's annual out-put of 365,000,000,000 by 70,000, the number of cases of phthisis in this country, and we are confronted with the sanitary problem of destroying 75,000 times 365,000,-000,000 microbes every year. These are rather discouraging figures, but it may be supposed that the vast majority of tubercle bacilli in the sputum die as the result of intercurrent disease or a pitiless environment. —*Med. Rec.*

HOW DOCTORS LIVE.

A correspondent of the *Medical Age* says: "I have endeavored to keep track of 100 of my medical friends after graduation, especially of what they did during the first five years, and find nearly 75 per cent. had to resort to other employment to make a living. Twenty-three received a salary either in addition to practice or separate therefrom. Fifteen were proprietors of drug stores. Three were insurance agents. Four loaned money. One sold real estate. Three were connected with medical journals. One was an agent for drugs. One for books. One preached. One was in the patent medicine business. Two were farmers. One a manufacturer. Two gave massage treatment. One sawed wood, and subsequently suicided. Twelve gave up in disgust, and one never tried practice at all. Twenty-nine graduates only in 100 exclusively devoted themselves to medicine, and of these 11 associated themselves with other practitioners, and in many cases fell heir to their practice."

AN ARMY MEDICAL BOARD.

An Army Medical Board will be in session in New York City, N. Y., during October, 1891, for the examination of candidates for appointment in the Medical Corps of the United States Army, to fill existing vacancies.

Persons desiring to present themselves for examination by the board will make application to the Secretary of War, before September 15, 1891, for the necessary invitation, stating the date and place of birth, the place and State of permanent residence, the fact of American citizenship, the name of the medical college from whence they were graduated, and a record of service in hospital, if any, from the authorities thereof. The application should be accompanied by certificates based on personal knowledge, from at least two physicians of repute, as to professional standing, character, and moral habits. The candidate must be between 21 and 28 years of age, and a graduate from a Regular Medical College, as evidence of which, his Diploma must be submitted to the Board.

Further information regarding the examinations may be obtained by addressing the Surgeon General U. S. Army, Washington, D. C.

C. Sutherland,
Surgeon General U. S. Army.

INTERNATIONAL CONGRESS OF HYGIENE AND DEMOGRAPHY.

Telegraphic advices from London, under the date of Aug. 10, state that the seventh annual session of the International Congress of Hygiene and Demography opened in St. James' Hall, in the afternoon of that date. At an early hour the royal yacht left Portsmouth for Cowes, Isle of Wight, the object of the voyage being to bring to England the Prince of Wales, who was to preside at the Congress. His Highness arrived in London on good time and when he called the Congress to order there were 2,300 delegates present in the hall. Among the more prominent delegates in attendance were Professor Pasteur, of Paris, and Professor Koch, of Berlin. Many of the leading doctors and scientists of Europe will take part in the deliberations.

When the Prince of Wales arose to make his address of welcome he was heartily cheered. He discoursed understandingly on hygiene and said that the people were exposed to many sources of danger, owing to the existing state of factories, from overcrowding and from the unsanitary condition of towns. He was happy to say however, that statistics showed a marked improvement in this direction which might safely be taken as an earnest of the increased good to be accomplished by scientists in the future.

Among the many important subjects to be discussed is the general question of the means to be employed for preventing the spread of epidemic disease from country to country, which will be introduced by Surgeon General J. M. Cunningham, of England.

CONSANGUINITY, CONCEPTION, AND MALFORMATIONS.

Has the condition of the male parent, when begetting, any distinct influence on the offspring? A case related by M. Guéniot at the Paris Académie de Médecine would seem to fevor the theory that there is such an influence; but in this case consanguinity must be also taken into account. A woman married her nephew, a man three years younger than herself and for long ad-

dicted to absinthism and other forms of intemperance. She declared that he was always partially drunk when she admitted his embraces. The curse of the mediæval Melusina fell on the offspring: seven children were born, of which only one survived and several were deformed. The last child was of great size, causing labor to be difficult. It was anencephalous, with six fingers on each hand and six toes on each foot; the external genitals were absent. Two large serous cysts occupied the liver, and were the cause of the great bulk of the child. Considering how some of the most minute physical peculiarities and some of the most subtle mental characteristics are transmitted from father to child, it is not wonderful that the offspring may be influenced by the state of its sire when impregnating its mother. The influence is probably indirect in a case like the above. No doubt absinthism and ordinary intemperance affect the nutrition of all cells and fluids, spermatic included. The nervous condition of the mother may be unfavorable under the circumstances. The share of consanguinity in this case is doubtful. Recent researches tend to show that unions of consanguinity may keep up or intensify diseases and malformations already in the family, but there is no evidence that they cause new maladies and deformities.—*Brit. Med. Jour.*

THE MEDICO-LEGAL ASPECT OF THE JACK-THE-RIPPER CASE.

Much interest has been excited during the past week over the trial of an alleged "Jack-the-Ripper." The circumstances of the crime have been made very widely known. A woman of the lowest class was found one morning murdered and mutilated in an East Side resort. The person with whom she slept that night had disappeared, but the police apparently feeling it a matter of pride to capture some one, secured a half-witted Algerian who had slept in a room in the same house on the same night. In the course of time a very pretty web of circumstantial evidence was woven about him. The most important of these circumstances was the fact that stains of blood were found on the Algerian's clothes, on the floor or door between the rooms, and of course on the bed or clothes of the murdered woman. It was asserted by the medical experts that these stains all were mingled with matter which came from the small intestine, and that this chylous material came from a meal that was in the same stage of digestion. This identity of the different blood and fæcal stains, so far as we can make out from the reports, was based on the fact that tyrosin, and perhaps other products of pancreatic digestion, were found in them all, as well as in the scrapings from the prisoner's nails. Tyrosin is a substance which crystallizes usually in the shape of fine needles, grouped as radiated stars. In this respect it resembles somewhat hypoxanthin. It reacts to certain tests; but other bodies, such as sarkin, react in a similar way. Tyrosin is found in the urine in certain diseases. Altogether it would seem a little hazardous to convict a man on the microscopically established identity of minute collections of blood and intestinal matter. But the lawyers for the prosecution were skilful and the police had collected a voluminous mass of minor evidence, mostly from criminals. The result was a conviction of murder in the second degree. The medico-legal points raised were very interesting, and we do not doubt that the evidence was given most conscientiously. It is to be hoped, however, that it will be submitted some time to the judgment of the profession. At present there seems to be a feeling that the accused was made a scape-goat for the reputation of the Police Department.—*Record.*

A CHEMICAL ROMANCE.

When *Al-Embic* uncle's wife died, he sent a *Nit-rate* telegram to his sister *An-Alyze* asking her to join him on a short trip with the *Anti-mony* they received. A week later they started from the old homestead and let their colored nurse *Chlo-ride* as far as the next town with them, where they embarked on a steamer. As they passed down the beautiful river on the banks of which *Flowers of Sulphur* were in full bloom, they saw a crowd of little darkies taking a *Sand-Bath*, and they remembered this particularly as there was no other *Nigro-sine* during the entire trip. A black bird that flew past the vessel's bow was pronounced to be an eagle by one of the gentlemen on deck, but a sailor overhearing this, remarked: "That's not an eagle, that's a *Chro-mate.*" This unsolicited *Retort* did not please the gentleman, so he descended the companionway to take a *Water-Bath.*

In the captain's cabin quite a party had collected, and an animated mythological discussion was in progress as to the year, and of what, the goddess *Io-dide.* A medical student present said he had forgotten the date, but that there was no doubt that *Io-dide* of Arsenic. Drinks were then

passed, and the medical student took some *Schiedam-Schnapps* with water, which he said was a *Standard-Solution* known scientifically as *Hydro-gen*, and that he did not mind if he took another, *Ether*. His German friend, a doctor with green spectacles, whose name was *Amyl*, when asked if he would take one too, answered,—"Ich *Sulphur* dammt sein" if ever he'd let it pass.

This nearly resulted in a fight between the German and a minister present, who objected to the use of such *Sulphurous* language. The captain, recognizing the peculiar and *Specific Gravity* of the occasion, restored order by taking a club from the wall and blandly remarking, "No *Phos-phor-us*, gentlemen, if you please."

A gay crowd of young people had collected on deck, and the gallant captain showed much attention to the ladies, of whom there were quite a number. He let them look at *Mercury* through his *Beeker-Glasses*, showed them how he took soundings with a *Test-tube* and made himself generally agreeable. There seemed to be a great *Affinity* between himself and a girl nicknamed *Sili-Cato*, because she giggled every time she saw him. This so disgusted *Ani-Line* that she told *Sali-Cylic* that neither she, nor *Ga-Lena*, nor her sister *Ethyl*, would ever speak to her again. Everything went well until the German doctor's mother in-law, a regular *Tartar-ate* too much of the *Platinum-sponge* cake, served with the *Is-in-glass*, which precipitated her upon the *Fluor-in* an unconscious condition. This accident made the *Prussian-Blue*, but as he had carefully *Red Prussiate* before he started out on the trip, and had taken his medicine chest along, he was equal to the occasion, and soon able to announce to the anxious company that the old lady's illness was nothing serious, a mere fit of indigestion caused by her eating too much *Sauer-Stoff*. He further ventured the good advice that if people generally *Lead* a more regular life, and instead of stuffing at dinner would only *Dyn-a-mite*, the world would be healthier.

He said the word *Pig-ment* an animal, but in its metaphorical sense should apply exclusively to man. He supposed, however, it was no use preaching to the generality of man, for if born an ox, an *Ox-y-dize*. One of the passengers, who evidently felt himself hit by these remarks, said sotto voce, to his neighbor, that there was unnecessary *Caus-ticity* in the doctor's talk, a great deal of which was a transparent *Lye*. After the dinner, music was in order, and another German brought out a cornet, which he called his *Blow-pipe* and produced a composition *Bi-sulphate* followed by another *Bi-phosphate*.

Both of these compositions were very appropriate for the occasion, being rhapsodies by the sea, and hence fitly called studies in *Ultra-marine* by the learned doctor.

Then riddles and conundrums were proposed, the first one being, "Why are *Clay* and *Phosphorus* identical," the answer being "Because it is *A-luminous* material."

The next one was, "Why is the feeding of a bull at midnight a chemical operation?" Answer, "Because it is giving an *Ox-a-late* meal." A lawyer said that in so far as this could only apply to an ox, and not to a cow, he did not consider it a *Case-in* point.

The next conundrum was proposed by the medical student, and was as follows: "How can we all be made happy?" To which the doctor responded that he had a never *Feh-ling-Solution* for this question, which he would now have served to the guests in the form of champagne.

A crusty chap who did not appreciate the humor in all this light talk, remarked that he thought an habitual punster the greatest *Bor-on* earth, and that he would not be surprised to hear an *As-say* smarter things than that, indeed a *Copper-as* if it could talk. Fortunately the irascible German doctor did not overhear these ill-natured remarks, or there might have been a *Par-af-fine* black eyes in that company.

After all this fun the talk assumed a graver vein, and the festivities wound up, as will my story, with a few appropriate remarks by the minister. He said:

"When a mere child, I once asked a minister whether a bad man could ever go to Heaven. He replied that in virtue or *In-cin-e-rated* man's chances equal, providing reform took place in time; in other words, he did not think early *Cin-a-bar* to glory.

"Oh, my friends," he concluded, "we are none of us pure *Gold*, none without an *Alloy* of *Baser-Metals*, but, dear friends, if in the darkness of our sin, we will only *Cry-o-lite*, it will generally come to us.

"I once knew a man who led a very wicked life until his friends all said 'old *Nick-el* get him' but the *Dross* fell from his soul at last; and often after I heard his own *Tung-state* the story of his reform. My friends, all the world's a stage, and we are but actors on it. There are lives, pure, honest, undramatic, others *Ar-senic*, *Ac-id* were; sometimes even the *end* of such lives *Ar-senical* effects."—*V. G. Bee in Western Druggist.*

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Clinical Lecture.

SURGERY OF THE LUNGS.

BY DR. KRECKE,

OF THE MEDICAL FACULTY OF MUNICH, GERMANY.

Gentlemen:—Koch's recent discoveries have added new interest to the subject of surgery of the lungs; permit me, therefore, to detail some personal experiences, which, I trust, will be of both interest and value to you. The most of my experiments were made at the Erlanger Clinic of Professor Heineke. Allow me, however, at the outset of this lecture to state that, owing to certain complications, the ultimate success of the treatments was far from satisfactory; nevertheless, I consider the cases instructive as showing the general indications for, as well as the value of surgery of the lungs. Regarding the various indications for surgical treatment, I shall but briefly touch on this phase of the subject.

Surgery of the lungs may be considered from two points of view: either with reference to the nature of the surgical interference or with reference to the existing pulmonary disease.

Regarding the different pulmonary operations, we have but two at our command, namely, pneumotomy, and pneumectomy. Let me here say that I only regard such procedures surgical, as may be undertaken with the knife, while such as injections, cauterizing, and hypodermic medication, I class in the field of internal medicine. Of the above-named operations, pneumectomy can only be thought of when we have morbid growths of the lungs, or the like, to deal with. Although various experiments upon animals have been made, relative to the possibility of removing portions of the lungs, in all probability these procedures will never be tried upon the human being. Only in cases where the foreign growth has sharply defined limits can a removal of the affected portion of the lung be considered justifiable, and the well-known successful case of Kronlein illustrates a triumph of surgical technic. A similar case operated upon by Weinlechner resulted unfortunately.

Apart from these isolated cases of pneumectomy, indicated by the presence of morbid growths, the only rational surgical procedure in diseases of the lungs may be regarded as pneumotomy, and we will do best, therefore, if we discuss the subject before us from the standpoint of the disease, and not the operation. The disease which most imperatively demands surgical treatment is *pulmonary gangrene*. There is scarcely a practitioner who has not at some time met with the loathsome symptomatic picture of this disease, accompanied with its foul discharges, which are even unbearable to the sufferer's attendants. A spontaneous healing of gangrene of the lungs is almost unknown, and the dangers accompanying the disease are numerous and very great. Abscess of the brain is a frequent complication, other portions of the lungs may become infected, and all this apart from the great weakening of the patient owing to the constant drain on the system. In such cases every one will agree that if the seat of the trouble can be accurately determined, careful opening and drainage are certainly indicated. But the difficulty in treatment is chiefly due to the lack of an exact diagnosis. Here it would seem advisable to make a distinction between gangrene accompanied by a purulent pleurisy and that without. Empyema, of course, always necessitates the opening of the pleural cavity. If, in such a case, the presence of a gangrenous patch is suspected it is well to examine the lung by touch as extensively as possible, in order to determine the existence of any soft or nodulated areas. These areas, when found, should be treated with the thermo-cautery and freely opened. It is, perhaps, a wise procedure to always examine the lungs for gangrene in every case of em-

pyema.

The following instance comes very forcibly to my mind. I had operated for a case of empyema which had occurred after pneumonia, but the existing fever did not fall, as it generally does, in consequence of the operative procedure. I sought in vain for some adequate reason for this unfavorable symptom, but found none until several days later while changing the dressing of the wound in the thorax, I noticed a blackish mass protruding from the opening. It was easily removed and proved to be a portion of the lung in a gangrenous condition. After this the fever soon disappeared, the wound closed,and the patient convalesced. In another case which came under my observation some time later, the same elevation of temperature in spite of the operation was noticed, and—profiting by my former experience—I searched for gangrene, and found it. The case was a man, about twenty years old, who, in consequence of having swallowed some lye, developed a stricture of the œsophagus which was impassible. After bougies had been vainly used for a long period, symptoms of gangrene of the lungs began to manifest themselves, and at the same time the patient developed a purulent right-sided pleuritis. It was in a half-starved, frightfully ill, and truly pitiable condition that the patient was brought to this clinic for operation. The absolute hopelessness offered by any internal treatment was very apparent, and therefore, in spite of the patient's almost moribund condition, a speedy and thorough surgical operation was decided upon by Professor Heineke. First, external œsophagotomy was performed and a rubber tube introduced into the stomach; then, the empyema was relieved by resection of the ribs; and then, a careful digital examination was made for gangrene, and the disease found at the lower lobe and the gangrenous portion removed. The cavity was about the size of a hen's egg. The operation was conducted with the patient only partly narcotized, and he did not survive the shock, dying six hours later, apparently from heart failure.

In cases of gangrene of the lung occurring without empyema, it is most difficult to locate the disease. The only diagnostic method at all positive, is exploratory puncture. In such cases the operator should not be discouraged even although many repeated punctures are necessary. When the gangrenous portion has been found it will be recognized by the presence of portions of gangrenous tissue, foul discharges or perhaps even only by the presence of fœtid air.

In one case of this description I punctured fifteen times before being able to locate the disease. The patient was a girl, fifteen years old, who also had a stricture of the œsophagus, the result of swallowing lye. After many futile efforts had been made to pass a bougie, the patient was brought to the surgical clinic, and Dr. Heineke performed external œsophagotomy, introducing a slender catheter into the stomach. The next day a large catheter was introduced, and shortly after a rubber tube of considerable size.

It was truly a pleasure to see how rapidly the starving child gained strength. Convalescence was, however, soon disturbed by the appearing of symptoms which pointed to an existing communication between the trachea and œsophagus, and the outlook became still more serious, when, accompanied with fever, typical gangrenous expectoration appeared. Over a dozen punctures were made without any result; finally, a puncture resulted in finding a blackish discharge which had the typical, penetrating odor of gangrene. Excision of the ribs was performed, and we were able to remove the entire gangrenous portion of the lung. A tampon of iodoform gauze inserted into the cavity completed the operation. Again the child convalesced with astonishing rapidity; but it was not long before an elevated temperature again made its appearance, caused by the development of a left-sided serous pleuritis. This was punctured several times, but the child gradually sank and died soon after.

At the autopsy, besides the communication between trachea and œsophagus, several abscesses were found in the lung. The gangrenous cavity which had been operated upon was in the process of healing. Undoubtedly, the sole cause of the non-success of all our therapeutic measures was a continual re-infection through the tracheo-œsophagal fistula. While this case resulted fatally, it nevertheless showed, unquestionably, the beneficial results obtainable by surgical interference in cases of gangrene of the lung, and, therefore, that pneumotomy must be looked upon as a most valuable as well as a trustworthy operation. Successful cases in the hands of other operators substantiate this assertion. Slawyk reports 14 cases with 8 recoveries, and Seitz 19 cases with 4 recoveries and 4 improvements, 11 having died. It must be remembered, however, that many of the fatal cases were not the result of a failure of the operation, but—as in my own cases—the result of other sequellæ.

The prognosis of gangrene of the lungs is so hopeless, that any operative procedure

that offers even the slighest hope of recovery, should be eagerly resorted to.

Regarding surgical interference in *abscesses of the lungs*, the same can be said regarding gangrene. The indication is that they should be opened; and further that this course should be pursued, although the abscess has previously opened spontaneously into one of the bronchi. According to Seitz, out of 11 cases 5 recovered and Slawyk's statistics show that out of 13 cases only 3 resulted favorably. I, personally, have had no experience with the surgical treatment of pulmonary abscesses, and, therefore, have not statistics to offer. In the only case coming under my observation, while the presence of an abscess was positively diagnosed, I was unable, even after repeated punctures to locate its seat, and we must, therefore, overlook this case.

An effort has even been made to treat bronchi-ectasis by surgical means, but the majority of authorities on the subject have dismissed the feasibility of the operation. Bronchi-ectases do not usually exist singly, but are multiple, and therefore the opening of a single cavity can be but of very questionable benefit to the patient. If the presence of only one bronchi-ectasis cavity were indisputably diagnosed, surgical means would seem justifiable.

I once had the opportunity of attempting a surgical operation in a case of bronchi-ectasis, but unfortunately was unsuccessful. The case was brought to this clinic for the purpose of having an operation performed for empyema. The patient was a man, forty-eight years old, who shortly before had been admitted to the Hospital in a deeply cyanosed condition. The only history obtainable from him was that he had been suffering from pulmonary trouble for a long time, and that a few days previously he had been attacked with severe fever. A very small area of dulness was found, from which some pus was evacuated with the exploring needle. Several punctures in other locations revealed nothing. Owing to the very small area of dulness, the diagnosis of empyema seemed to very doubtful, still I felt justified in opening the thorax by resection of the ribs. Having done this, however, I found the pleural cavity empty, and the immediate appearance of a pneumothorax made the examination of the lung most difficult. Several punctures of the lung were made, but they revealed nothing, and so I was forced to conclude the fruitless operation. The patient sank rapidly and died within a few hours. The subsequent autopsy revealed a large bronchi-ectasis in the lower lobe of the left lung, at the lower extremity of which was a suppurating area corresponding with the area of dulness which had been found, and from which pus had been obtained. In my own opinion, I do not believe that the man would have reaped the least possible benefit from an opening of this cavity.

It is very evident that the justifiability of operative procedures in this class of cases is open to grave objections, and only the more so when it is considered that a lethal termination of the case by the development of pneumo-thorax is considerably hastened. I must confess, that in the case just mentioned, I hesitated considerably, having in mind the deep cyanosis of the patient, and the dyspnœa. Had the case been treated therapeutically, and carefully watched, the result might have been different, but the condition of the patient seemed to brook of no delay in decision.

We are finally brought to the consideration of the surgical treatment of *tubercular cavities*. Our inability to cope with the general infection, has almost put such procedures out of the question, and all efforts in this direction have been apparently futile. So, for instance, in six cases operated upon by Cérenville, five died, and in the remaining case the result was doubtful. Only in such cases where severe symptoms, such as high fever, etc., can positively be shown to originate from a single cavity, can the thought of a surgical interference be contemplated. This condition of affairs is clearly elucidated in the history of the following case, operated upon by me a few months ago. The case was referred to me through the kindness of Professor Schech.

The patient was a tuberculous man, 33 years old, in whom evidences of a cavity in the lower lobe of the right lung had gradually appeared. Simultaneously the patient developed a severe septic fever with frequent chills, which was presumably caused by the cavity. The operation was performed without difficulty. The lobes were found firmly adherent to each other. By means of a blunt pincette an opening was made through the lung tissue into the cavity, which latter was packed with iodoform gauze, and an antiseptic dressing applied. After the operation the fever fell immediately, and the patient seemed much improved. The discharge from the cavity was considerable. All went well for some time and the patient

was even able to leave his bed for hours at a time, when suddenly severe hæmoptysis occurred and the patient died.

In such cases, as has been said, surgical interference is indicated. We can only regret that we have not yet had an opportunity to test the simultaneous action of Koch's tuberculin in conjunction with such operative procedures.

A few more words regarding the method of performing pneumotomy and the after treatment. In the cases cited the opening of the lung was always made with a blunt instrument. In deep lying cavities or gangrenous patches it is well to penetrate the lung tissue by means of the thermo-cautery. This was also the method adopted by Sonnenburg. Instead of dainage, a sterilized tampon should be used, preferably iodoform gauze. Irrigation can not be recommended, especially after the experience we have had in its use in empyema. It has frequently caused asphyxia, and at other times the penetrating of the liquid into the bronchi not infrequently gives rise to violent paroxysms of coughing, and besides this the subsequent discharge from the wound is increased instead of decreased.

Such, gentlemen, are the few experiences which it has been my privilege and pleasure to report to you. Let us only trust that they may have awakened sufficient interest in some of you, to encourage you to broaden this domain of surgery by your personal study and zealous investigations.

COMMUNICATIONS.

DIAGNOSIS AND TREATMENT OF CHRONIC ENDOMETRITIS, WITH FOUR ILLUSTRATIVE CASES.

BY HOMER C. BLOOM, M. D.,
PHILADELPHIA.

After a most careful study into the histories of some recent cases of general chronic endometritis, I have no hesitation in affirming that it is a disease whose treatment is more at fault than that of any other from which women suffer; and in fact, not only the treatment is at fault, but as frequently the diagnosis, causation and everything connected with the successful management of this condition.

My object in writing this article, is to give some of the practical points as gleaned from a series of cases, the notes of which I have carefully preserved, remembering that however conscientious the general practitioner may be, he has not the time to devote himself to the careful study of special diseases.

The first case in this series was a married woman, thirty-seven years of age, seven pregnancies—five at full term and two miscarriages at the third month—since which time she had been ill. She complained of the following symptoms: Sensation of dragging of the lumbo-sacral region, bearing down pain in the pelvis, menorrhagia, with gastric disturbance, pain and pressure upon the top of the head, and muco-purulent leucorrhœa, with flushes and constipation, pain and tenderness of the mammary glands, sleeplessness, mental depression, showing marked symptoms referable to the general nervous system.

Upon digital examination, the first abnormal condition which attracted attention was the prolapsed and tender uterus, which was enlarged, felt soft and readily escaped from touch. Aside from this prolapsed condition which was due to its weight, there was no displacement, neither was there any adhesions, as it was perfectly mobile, the cervix was patulous and soft as in pregnancy. The sound passed to a depth greater than normal, i. e., three inches plus, and came in contact with irregularities of the mucus membrane—to the touch as transmitted by the sound—the fundus felt soft and velvety, there was considerable hæmorrhage upon the withdrawal of the sound. The speculum showed the muco-purulent discharge tinged with blood escaping from the os.

Before considering this case further, it is worth while to consider the etiology of this important lesion.

Constitutional diseases are prominent causative factors. Strumous diathesis, general debility, faulty hygiene and nervous exhaustion; gonorrhœa and syphilis are potent causes and give rise to most disasterous complications; passive congestion from displacement, badly fitting pessaries, excessive venery, imprudence at the menstrual period, improper attention during parturition or lying-in period, abnormalities of the canal with stenosis, neglected lesions following child-birth. Also abortion, a most frequent cause. In the present case, what is likely to have been the cause of her condition? Referring to her history, we find she has not been well since her last pregnancy, which resulted in a miscarriage at the third month.

Following this miscarriage, she had a fœtid discharge per vaginum, passing shreds of decomposed tissue.

We know that in the third month of gestation, the delivery of the placenta often presents difficulties less frequently met with at a more advanced stage of pregnancy, or at an earlier period, when both are expelled together. Evidently in this case there was retention of placental issue, which no doubt accounts for her condition.

From a pathological standpoint, we have in general chronic endometritis hypertrophy of the mucus membrane; the most simple is glandular hypertrophy, resulting in a roughened papillary surface. We also have a form in which the surface is studded with fungoid growths, the vessels becoming dilated and enlarged, and the patient's health directly impaired by loss of blood.

Arriving at a positive diagnosis in general chronic endometritis as a separate disease, we must differentiate from new growths benign or malignant, growing within or upon the mucus membrane. Microscopical examination of the endometrial discharge will clear up all doubtful cases. This brings us to the treatment as carried out in this case. The local treatment consisted in exposing the cervix through a speculum, catching the anterior lip with a tenaculum, making gentle traction, straightening and steadying the uterus, so that the exact course of the uterine canal was easily found by passing the sound; in like manner the dull, blunt wire curette was passed, carefully but boldly over all the uterine surface where the least roughness existed; this was done antiseptically, and after moderate dilitation of the cervical canal and the characteristic granular discharge which under the finger feels rough and friable, came away with the curette.

The mucus which remained was sucked out of the canal by the uterine syringe, and wiped dry by a cotton-covered applicator. This is often a difficult procedure, owing to its tenacious character. An alkali, as a solution of bicarbonate of soda, will aid very materially in its removal. And the thorough removal of all uterine secretions is one of the most important steps in the treatment of these cases, previous to the introduction of your remedial agent.

An intra-uterine injection of ten minims equal parts of a saturated solution of iodine and crystals of carbolic acid was carried up to the fundus, through a long-nozzled, glass-barreled graduated syringe, injected gently and without force, placing a pledget of cotton under the cervix, preventing contact of medicine with the vagina. The surplus of this mixture usually flows back, if it does not pass the sound, and all that is left will likely come away.

This patient, as indeed all patients undergoing this local treatment, we advised to remain quiet for a few hours, and the same treatment was repeated once a week for the first three weeks, then the curetting was omitted, and the application of the iodine and carbolic acid was continued weekly for two months. There was considerable oozing of bloody serum from the uterus for several days after the curetting. Each succeeding menstrual period came on at the proper time; the flow less profuse, and with the addition of the constitutional treatment, which consisted in regulating the bowels with a saline mixture, tonics of iron, alternated with the compound syrup of hypophosphites, the patient was cured at the end of the fourth month, and is now perfectly well, six months after her discharge.

A very important question: Is there no danger in connection with this local treatment? Unhesitatingly, yes. The contra-indication for this treatment would be any inflammation, acute or sub-acute, surrounding the uterus; and this requires the most careful diagnosis, eliminating all complications present, and should there be found the least peri- or parametric inflammation complicating a given case, under no considerations use intra-uterine injections.

Case II.—An old lady aged 67, mother of twelve children, menopause at forty-five, has had a thin, serous, bloody, leucorrhœal discharge ever since the climacteric period, with great itching of the genitalia, flushes of heat with vertex pressure, all other symptoms nil. Upon physical examination, found shortening of the vagina due to age, the cervix was soft and patulous, uterus tender upon firm pressure, and had not undergone that atrophy which is physiological at her age. The uterus was larger than a normal uterus before the climacteric. The introduction of the sound gave great pain, and the endometrium was found to be roughened all over its surface. The sound measured three and a half inches; upon introducing the speculum, the characteristic discharge of a dirty, serous appearance was seen coming through the patulous os. This particular leucorrhœal discharge being present in almost all cases of pruritus vulva after the menopause.

Accounting for the causative factor in these senile cases, we must be governed by the history. Interrogating this patient, we

found her hygienic surroundings at the climacteric were not conducive to this physiological change. We are therefore led to suppose that from the fact of her being perfectly well up to this period, and giving birth to twelve children at full term, that the etiological conclusions would be faulty hygiene.

The treatment was curetting every week, followed by intra-uterine injections of fifteen minims equal parts of carbolic acid and glycerine. This was continued for four weeks, then the curetting was omitted and the intra-uterine injections continued every week for a period of six weeks, after which an intra-uterine injection once a month for three months completed the cure.

There was from the first treatment, marked improvement in the pruritus, and the uterus rapidly underwent that physiological change which is natural at this age; sound measuring at the last examination, one and a half inches.

The constitutional treatment in this case was simply regulating the bowels, and a salt-spoonful of chloride of ammonium, in a wine-glassful of water after each meal.

Case III.—This patient was twenty-one years of age, puberty at sixteen. Dysmenorrhœa; married two years; sterile; perfectly well until shortly after marriage; had not been well since. One week after marriage, commenced suffering with heat and burning in the vagina, aching and sense of distress in the perineum, frequent micturition, with a sensation of scalding. A profuse, purulent, mucus discharge from the vagina, great irritation of parts around the vulva.

These symptoms continued with more or less severity for three months, when there was an aggravation of all symptoms, with rigors, fever, nausea, vomiting, severe pain diffused all over the abdomen. She was compelled to give up and go to bed; suffered from a severe attack of peritonitis, as diagnosed by her physician. After twenty-one months of suffering, in which time there had been repeated attacks of pelvic peritonitis, with marked constitutional disturbances, we see a patient profoundly ill, anæmic, loss of flesh, nervous system greatly disturbed, pulse frequent, temperature varying from a degree to two degrees morning and evening, with sharp paroxysmal pain, which is circumscribed. She was able to point out the exact spot in the left ovarian region whence this pain started, and from where it radiated. There was great tenderness at this point. There was a decided dragging, heavy feeling in the lumbo-sacral region; vertigo, with pain and pressure on top of the head; dyspepsia, nausea, constipation, and flatulence, frequent micturition, with menstrual function regular in time, but profuse; the menorrhagia lasting ten days, and attended with cramp-like pains and the passing of clots. She had a mucopurulent leucorrhœa.

Upon physical examination I found the vagina somewhat shortened, cervix low down upon the floor of the pelvis pointing forwards, soft as in pregnancy. The uterus was large, tender upon pressure; body sharply anti-flexed. There was strong adhesion, and it was immobile. There was a hard, tender, irregular body in Douglas' pouch, which appeared to be attached to the uterus; and to the left in the post-uterine space was a circumscribed mass about the size of a small orange, fluctuating and very tender; and from the character of the pain excited by touch, ovarian; also felt a tumor somewhat elongated, movable, slightly fluctuating, not separable from the uterus; lying upon the left above the circumscribed mass, which was evidently the left tube in a state of chronic salpingitis.

I had here to deal with the resultant lesion of a specific cause, which probably lighted up at the commencement of her illness, acute ovaritis salpingitis and pelvic peritonitis.

The lesion which we are more particularly discussing in this paper is the general chronic endometritis which this patient suffered from. The greater number of cases of general chronic endometritis which have come under my observation, can be traced to parturition or arrest of post-parturia and post-menstrual involution, with gonorrhœa as the next most important etiological factor.

The treatment pursued in this case was entirely different from the previous cases mentioned. Intra-urine injections should never be used in cases similar to this, where there is the slightest indication of inflammation of the adnexa; the consequence of such treatment would be to re-kindle or light up a serious pelvic inflammation.

Both local and constitutional measures were carried out in this case. The constitutional treatment consisted in first regulating the bowels, one of the most important parts of the treatment of all uterine cases. She was given at first a saline, preferably sulphate of magnesia for a few weeks, and then a laxative pill; she was also put upon the four chlorides:

℞

Hydrarg-chloridi corrosivi.....gr. j.
Liquor arsenici chloridi.....f3.
Tr. ferri chloridi.....
Acid hydrochloric diluti, aa.....f5iv.

Syr. simplicis.....f℥iij.
Aquæ qs ad.....f℥vj.
M. Sig. A dessert-spoonful well diluted with water, three times a day after each meal.

This medicine was given for six weeks and then omitted for a month, and again taken after six weeks, and continued in this manner for six months, with the additional prescription:

℞ Ergot flu. ext.
Tr. nucis vomica, aa.....f℥j.
M. Sig. 40 drops in water before meals three times a day.

This last prescription is very efficient in many of these cases where the uterus is enlarged and tender, complicated by menorrhagia.

She was ordered plenty of good nourishing food; with this treatment her general condition improved.

The local treatment consisted in first removing the secretions from the cervix, and applying tincture of iodine; also to the exudate and entire vault of the vagina every third day; once a week a tampon of antiseptic wool saturated with glycerole of tannin was placed against the cervix, allowed to remain twelve hours and removed, and directed to take a hot water douche. These douches were also ordered night and morning regularly, and to use not less than a gallon of water and to take them through the Gordon irrigator attached to the fountain syringe, the very best method by which the patient herself can successfully employ hot water douches. After six months she is much better, increased in flesh, strength and nervous condition, and some improvement in her local symptoms. At the same time this gain cannot be permanent with the diseased condition which evidently exists upon the left side. When this patient can make up her mind to have something permanent done, it will be necessary to remove the left tube and ovary; in cases of a specific origin it is always better to remove both appendages; even after salpovectomy your patient will not be cured until the endometritis is treated. It is the careful after-local treatment in many of these cases which give such brilliant results, the neglect of which often causes unkind criticism of our most skilled surgeons. After a practical study and analysis of a large number of cases which were operated upon for specific disease of the appendages, I have found months afterwards, in a great majority of these cases, chronic endometritis and the symptoms which belong to this lesion.

Case IV.—The patient, a lady of splendid physique, married at twenty-three years of age, and had her first child two years later. Her labor was tedious, but her recovery was satisfactory. When her child was two years old she became pregnant again, and miscarried at the third month. She has had in the fourteen years since her marriage, four miscarriages, and all of them at the second month. She suffered from menorrhagia, pain in the lumbo-sacral region, pelvic tenesmus, flushes, vertigo, profuse, mucopurulent leucorrhœa and general depression.

She was first treated five years ago for endometritis; this gave her some relief, however only temporary, and she was repeatedly treated for the endometritis, but her old symptoms would return again and again. The physical signs proved this to be a typical case of bi-lateral laceration of the cervix uteri. In view of this condition, restoration of the cervix was proposed in the hope that the operation would give her permanent relief; but not until the endometritis was curetted and carbolic acid and iodine was applied once a week for a month, at the end of which time the endometritis was apparently cured; but not the etiological factor upon which it depended—the injured cervix—the operation for its restoration was performed. The case progressed nicely, union was complete, and one year afterwards there has been no return of the endometritis, nor any of the former symptoms.

From my own personal experience, I can safely say in those cases of trachelorrhaphy, proceeded by thorough treatment of the uterine cavity, have been remarkedly successful, and it may just be here why Dr. Emmet's great boon to suffering woman is falling into undeserved disrepute, simply from want of care upon our part in the proper and successful management of these cases preceding the operation.

I have purposely selected these four cases out of the last series of forty cases, as being typical of the most prominent assignable causes in this the most important lesion from which women suffer. Probably the local treatment as practiced in these cases might lead one to suppose that we are dogmatic enough to think there is no other remedial measures by which we can reach the same end. I wish to say at this time, a series of cases of this particular lesion is being treated by the application of ichthyol, and I hope in a subsequent paper to prove the great value of this therapeutic agent in all diseased conditions of the cervical and endometrial membrane.

THE USE OF COLLODION AND RUBBER ADHESIVE PLASTER IN SURGICAL DRESSINGS. *

BY W. J. CHENOWETH, M. D.

DECATUR, ILL.

The remedy last used, preceding a cure, has popularized many ointments, salves, and liniments, and has given confidence in blue yarn strings tied around the neck, bags of sulphur hung across the chest, and to tincture of arnica. And we may rely on other remedies quite as useless as any of these, however sceptical we may be of them. Hence in presenting the claims of Rubber Adhesive Plaster, and of Collodion, both of which are in general use, but not as extensive use, as I think their merits demand, I may be governed by the *post hoc propter hoc* method of reasoning, but expect to present such suggestions only as if wrong, may be disproved by trial.

Calling attention to a few cases where these remedies may be employed advantageously will suggest others.

Where a roller bandage can be applied with benefit the rubber plaster will usually do better. It will relieve in lumbago, intercostal neuralgia, pleurodynia, strains and fractures of muscles, torticollis, fractured ribs, ulcers of the leg (whether from varicose veins or from other cause.) It is invaluable in synovitis, and in fractures of the femur, where extension is demanded. Its capacity to relieve is sometimes limited by inability to apply it. But in all cases the method of its application is the measure of its success. This can be illustrated by treating a fractured rib, if well applied, relief is obtained promptly, if poorly, it will not relieve. The chest being exposed, one end of the strip of plaster about two inches wide and twelve inches long, is applied to the back near the spinous processes, or on the front part of the chest near the sternum, commencing a short distance below the fracture, and being firmly held by the patient or by an assistant, the other end is carried over the chest and drawn as tightly as can be done without tearing. Other pieces, of the same width and length, and adjusted like the first, each slightly overlapping the one below, should be applied until as much above as below the point of fracture.

The little knowledge of the value of rubber plaster in the possession of certain members of the profession, can be illustrated by a case which fell under my notice recently. Called to see a lady who had been kept in bed for more than a month, because of an ulcer over the tibia, for which some kind of an ointment had been prescribed. The application of rubber adhesive plaster was advised so that she might secure necessary exercise by walking. Refusing at first she finally consented. After covering the leg from below the sore to some distance above it with plaster drawn as tightly as possible (a small piece of borated cotton having been placed over the sore and covered with the plaster,) and applying a roller bandage, to be sure that the rubber would not become loose, she walked across the room with ease. After about a week she received a message from her late attending physician, expressing great surprise that any doctor should apply a bandage as I had done, and advised her to cut a hole through the bandage over the sore, if I still persisted in having her wear it. The hole was not cut, the dressing was continued, the woman got well.

It goes without saying that in long and deep wounds, there has not been anything discovered which can absolutely supply the place of the suture. The success of treatment in such cases depends on obtaining close co-aptation of the parts in all of the divided tissues. But in superficial wounds, and in all wounds where the deep parts cannot be accurately approximated with sutures, there is no better dressing than collodion applied over cheese-cloth. In certain injuries such as crushed fingers, it is better to use borated cotton as it will prevent the contraction of the collodion from interfering with the circulation of the parts.

In injuries of the face, where it is desirable to avoid scars, dressings of cheese-cloth and collodion are preferable. Since commencing this article I saw a boy, with an ugly cut through the lower lip caused by a base-ball club. The wound being diagonal was dressed with difficulty, but the stitches were avoided by placing a narrow piece of cheese-cloth over the lip and covering it with collodion, and after it was dry enough to admit of tension, drawn tightly and the cloth twisted and placed on the cheek. The parts were closely approximated and healed with the slightest show of a scar.

After stitches have been applied in an operation for hare-lip small pieces of cotton batting can be placed over the lip, on each side of the line of the cut, and the cheese-cloth and collodion applied to one cheek and, when dry, stretched over the lip and fastened

* Read before the Illinois State Medical Society, May 21, 1891.

to the other cheek, the parts will be immovable, and when we wish, the cheese-cloth can be cut over the batting and lifted off the lip. The sutures can be removed and the cheese-cloth and the collodion applied over the first dressing and may be depended on to hold the parts in apposition.

This is one of the best possible dressings after removal of tumors from the breast. About ten years ago a tumor was removed from the breast of a lady forty-five years of age, by one of the best surgeons in the west, an epithelial growth being removed from the lip at the time. The lip healed and but a small scar marked the place of its growth. But the tumor returned after a short time. Not being convenient for the patient to visit the surgeon who had done the operation, I was asked to remove the growth. It was now about the size of a goose egg. After removal it was found necessary to take several stitches to hold the parts together, over and between them the cheese-cloth and collodion was placed; and drawn as tightly as possible. The dressing was not removed until the parts were entirely healed. Union took place by the first intention, and up to this time there has not been a return of the trouble. Whether the dressing had anything to do in preventing it I cannot say, but believe that it had. I have used the same dressing in the removal of mammary tumors since that time, but instead of tying the stitches and placing the collodion dressing over them the parts are drawn together with thread and held until the dressing is dry, the thread is then removed and the parts left with the dressing only.

After the sutures have been applied in an abdominal section the line of the incision is covered with antiseptic cotton and over this the collodion dressing, the rubber bandage, and roller being applied in the usual way.

In wounds of the scalp this dressing is easily applied and will hold the divided parts better than any other, and until the growth of hair removes it, by which time the parts will have healed.

Success in using the collodion, as was said of the plaster, depends on the manner in which it is applied. The parts should be brought close together and held until the dressing is dry, and being antiseptic and germicidal, may be relied on as effective.

The collodion must be of good quality, which can only be assured by making it yourself. The gun cotton must be of a kind that will dissolve in common commercial sulphuric ether in sufficient quantity to cause the liquid to be nearly of the consistence of glycerine and it should have a slightly yellow appearance.

Without intending to make invidious distinction amongst the many samples of collodion on the market, I have used with satisfaction Charles Pfeister's, Billing & Clapp's, and Anthony's.

VOMITING OF PREGNANCY; ITS ETIOLOGY AND TREATMENT.[1]

BY F. BLUME, M. D.,
ALLEGHENY, PA.

Pregnancy, as a rule, is complicated with a variety of disorders, which, though in many instances causing much discomfort, are termed physiological as long as they are not associated with serious disturbances of the organism. Derangements of the gastro-intestinal canal, nausea and vomiting, to the consideration of which I invite your attention to-night, are such a regular occurrence during the early period of pregnancy, that experienced women consider them as positive signs of conception.

The so-called morning-sickness—nausea and vomiting early in the morning, or even after meals during the first few months of gestation—have, in the large majority of cases, no effect either upon the course of pregnancy or upon the health of women. Although the ordinary morning-sickness sometimes persists during the whole period of pregnancy, it remains endurable, causing the patient rather annoyance than injury. There are intermissions, either spontaneously or the consequence of some treatment, the digestive functions remain more or less normal, and the vitality of the patient is not essentially impaired. In some, fortunately very rare instances, however, nausea and vomiting become incessant and uncontrollable, the stomach rejects everything, the patient grows weaker till the most extreme degree of exhaustion is reached, and death from starvation threatens.

The onset of this grave form of the affection is gradual, and does not differ in character from the usual morning-sickness. But soon the nausea becomes more intense, the vomiting more frequent. The ejected matter consists of food, mucus and bile. The appetite is more or less impaired or perverted; the thirst is excessive; constipation is more

[1] Read before the Allegheny County Medical Society, June 16, 1891.

frequent than diarrhœa; the urine is scanty, concentrated and contains albumen and casts. The pulse grows small and rapid, the temperature rises and continued fever develops.

With the progress of the disease the condition of the patient becomes more and more alarming. The nausea is almost constant, adding greatly to the discomfort of the woman. The efforts at vomiting are accompanied by violent retching and pain, not the smallest amount of food or drink is retained by the rebellious stomach, the smell, even the thought of nourishment, or the slightest movement of the patient, induces an attack. The vomited matter is finally mixed with blood. The thirst is tormenting, the throat and mouth are dry, the tongue brownish, the breath fetid, the abdomen tympanitic. The consequences of this continued suffering soon become very pronounced by the marked alteration of the features, the extreme emaciation and the profound depression of the patient. Shortly before life ends vomiting ceases and coma supervenes.

Cases of persistent vomiting, which terminate fatally, are certainly very rare. Even after the application of various methods of treatment has failed to influence the course of the disease, and while the induction of abortion was earnestly considered, the patients have recovered spontaneously and have gone to full term, as I have seen in the only instance of this grave disorder which has come under my observation.

There is considerable diversity of opinion as to the causes which may incite hyperemesis, and, in spite of numerous theories and hypotheses, the etiology of this disorder is by no means clear. It is almost universally accepted to be a reflex neurosis originating in the uterus and dependent either upon pregnancy alone or upon co-existent pathological conditions.

Pregnancy itself, the growing ovum, which acts as an irritant by the simple mechanical distension of the uterine cavity and its peritoneal covering, is in the first place to be mentioned as the most potent etiological factor.

Cases of multiple pregnancy and hydramnion, which present a disproportion between the passive distension and the active growth of the uterus, and which frequently are complicated with hyperemesis, confirm this view. Moreover, the induction of artificial abortion, our last resource in desperate cases, which almost immediately relieves the patient when done in time, is founded upon this theory of passive uterine distension, and strongly supports it.

Spontaneous death of the fœtus, followed by immediate or remote abortion, is another remarkable fact in favor of this view.

A patient of mine, the mother of two children, was suffering from double laceration of the cervix, erosion and endometritis. She refused surgical treatment, and was relieved by repeated irrigations of the uterus with carbolized water, and by the application of tincture of iodine. She soon afterward conceived, and her pregnancy was complicated with the ordinary morning-sickness from the second month to the beginning of the sixth, when the vomiting suddenly ceased. Two weeks thereafter she told me that she did no longer feel the movements of the fœtus, that vomiting had ceased, and that she therefore believed the child was dead. Though I could not detect the fœtal heart-sounds, I gave my opinion with reserve. Three and a half months later I delivered her of a dead fœtus about five months old.

This case affords the most striking evidence of the discontinuance of reflex symptoms after the removal of the inciting cause. We have here pregnancy complicated with pathological conditions of the uterus, as double laceration of the cervix, ectropium and probably a but partially cured endometritis, conditions which existed prior to conception and continued after the death of the fœtus. But in spite of the persistence of these pathological conditions of the uterus, and of the retention of the dead fœtus for almost four months, the vomiting disappeared with the death of the fœtus, that is, with the cessation of the mechanical distension of the uterine cavity.

The influence of primary gravidity is demonstrated by the fact that hyperemesis in its grave forms is essentially an affection of primiparous women, and it is to be referred to the greater resistance of the virginal uterus.

Numerous other causes are given as etiological factors by different observers, among them: pathological conditions of the cervix, chronic metritis and endometritis, displacements of the uterus, inflammations of the pelvic peritoneum and connective tissue, ovarian neurosis, neurotic predisposition, hysteria, and lastly, diseases of the gastro-intestinal canal, especially gastric ulcer, chronic gastritis and constipation.

Morbid changes of the uterus are frequently the cause of reflex neuroses in non-

pregnant women. The dependence of gastric disturbances upon the irritability of the uterine nerve-fibers, due to flexion and version of the uterus, to an eroded and congested cervix, to metritis and endometritis, has, in many instances, evidently been proven. Relief has been obtained by the removal of the exciting cause, by the treatment of the uterine diseases after gastric medication had been tried again and again and had failed entirely.

Bearing in mind the physiological changes of the uterus during the pregnant state, its increased functional activity, the influence exerted by gestation upon the nervous system, and the relation between the neuroses and the disorders of the reproductive organs, so often conclusively proven in non-gravid women, we are compelled to acknowledge the various pathological conditions of the uterus as prominent etiological factors deserving our earnest attention. Cases are on record where the application of caustics to the eroded cervix, scarification of the congested vaginal portion, dilatation of the cervical canal, correction of a flexion, have proven successful in stopping the vomiting, and thus demonstrated the connection between the uterine lesion and the reflex nerve action. In other instances, however, the result of the gynæcological treatment has not been so satisfactory, either transitory or no relief has been obtained, and, as a consequence, the influence of the uterine disorders upon the gastric phenomena, their importance as the causative diseases has been questioned.

Undoubtedly it will be often found difficult to decide whether the symptoms result from physiological or pathological causes; whether they are due to distension of the uterus or to morbid changes in the sexual organs. All methods of treatment, artificial abortion excepted, may fail to relieve the patient, and she finally may get well by absolute rest and complete abstinence to the surprise of her medical attendant.

Such cases are certainly rare, while, on the other hand, there is abundant clinical evidence of the effect of local treatment. Numerous women have been benefited by the treatment of the uterine lesion; the reflex symptoms have been mitigated or cured by the improvement of the causative disease, and the connection between both has thereby been confirmed.

Attention has been drawn to the importance of endometritis as an etiological factor by F. Veit, [1] who reported three cases of uncontrollable vomiting, where he was compelled to interrupt pregnancy, and where he found inflammatory processes in the decidua, serotina and vera. Veit believes that by his researches the dependence of hyperemesis upon endometritis is positively proven. As a rule, the endometritis exists prior to gestation, the symptoms are but insignificant, became palpable, however, with the beginning of pregnancy, which frequently is interrupted by this complication. In many instances the endometritis decidua will be found to be the cause of the uncontrollable vomiting; the connection through sympathetic paths must be the same as between gastric disorders and endometritis in nongravid women. The evidence of an anatomical base, he continues, renders a most careful examination of the uterus imperative, and, if the diagnosis of endometritis, which is very difficult before the removal of the ovum, can be made out, it may be of determining influence as regards the advisability of inducing abortion.

Quite recently E. H. Grandin, [2] discussing this subject in the New York Obstetrical Society, suggested ovarian neurosis, pressure on unusually hyperesthetic ovaries as a cause of hyperemesis. This view, he says, would be suggested by Dr. Coe's case, which showed that the physiological vomiting of pregnancy could be palliated by teaching the patient to assume the genu-pectoral positions before rising, and as often during the day as necessary. He would explain the vomiting of pregnancy, then, by the fact that during the early months the uterus lay low in the pelvis and pressed on the ovaries; at the third month, when the vomiting usually ceased, the uterus rose above the pelvic brim. In cases of pernicious vomiting it was possible the ovaries were either enlarged through disease or had become impacted between the pelvic brim and the lower uterine segment.

Grandin's theory, though it may be applicable to a given case, will probably not be favorably accepted. To-day the view is predominant that reflex-neuroses may originate in the uterus, and not in the ovary. The removal of normal ovaries for the relief of reflex symptoms is at present restricted to exceptional cases. and it is believed that if a satisfactory result is obtained by the operation, this is due to the changes in the condition of the uterus, to the artificial induction

[1] Berliner Clinische Wochenschrift, 1887, p. 643.

[2] American Journal of Obstetrics, 1890, p. 1382.

of the menopause, resulting from oophorectomy. Clinical evidence supports this view.

Grandin's explanation, however, may prove valuable in so far as to induce us to carefully examine the ovaries in cases of hyperemesis. Prolapsed ovaries are by no means a rare affection, but it remains to be demonstrated whether pressure exerted upon them by the enlarged uterus stands in causal relation to gastric disturbances.

Nervous disposition and hysteria, so frequently met with among women of the better classes, add greatly to the discomfort of pregnancy, and, though there are certainly many exceptions, must be considered as prominent predisposing factors of the graver forms of vomiting.

The importance of diseases of the gastro-intestinal canal, especially of gastric ulcers, is emphasized by various authors. According to Horwitz [1] "hyperemesis develops in some cases complicated with more or less pathological changes of the stomach and of the intestines. The greater the disturbance in the alimentary canal the easier the ordinary vomiting takes on the character of the uncontrollable form."

The diagnosis of vomiting of pregnancy is by no means as easy as one might think at first sight. While the dependence of this disorder upon the pregnant state may often be determined without much difficulty, cases —especially of the graver forms—may present themselves where this will be found impossible, and where the diagnosis, therefore, must remain doubtful. Faggard[2] directs our attention to the fact "that so few cases of pernicious vomiting are recorded in German medical literature that the existence of this affection is even questioned." Carl Braun, in a fabulous experience of over one hundred and fifty thousand obstetrical cases, has never observed a single fatal termination. On the other hand, Robert Barnes has himselves seen nine fatal cases. McClintock collected close on fifty cases, and O. W. Doe forty-eight cases with eighteen deaths occurring within the last fifteen years, and registered in American and English journals. Gueniot records one hundred and eighteen cases with forty-six deaths.

It is not at all improbable, Faggard continues, that the difference of opinion as to the frequency of this disorder between the Germans on the one hand, and the American, French and English observers on the other, depends, in a large measure, upon the difference in diagnostic criteria insisted upon by the respective schools. In the majority of the fatal cases of alleged hyperemesis due to pregnancy reported by American, French and English observers, there is a notable absence of reliable records of *post-mortem* examinations. In the few cases collected by the Germans, on the other hand, the diagnosis during life has almost invariably been confirmed or negatived by exact investigation of the dead body. Horocks pertinently remarks: "Where there has been no *post-mortem* examination in a fatal case of vomiting, I do not think one is entitled to say that pregnancy caused the fatal vomiting. It may have been the cause, and the only cause, or it may have been an aggravation of some other cause, or may have had nothing to do with it. Scepticism as to the alleged frequency of this disorder in the present state of our knowledge is accordingly eminently in order."

According to Gueniot [1] three distinct factors are to be taken into consideration in making the diagnosis of vomiting of pregnancy: 1st. The diagnosis of pregnancy; 2d. The diagnosis of the adjuvant or determining cause of the vomiting: 3d. The differential diagnosis between obstinate vomiting due to pregnancy and that due to other causes independent of gestation.

It is both interesting and instructive to learn that errors in diagnosis have been made even by eminent clinicians. Thus Faggard[2] tells us that Trousseau once diagnosticated uncontrollable vomiting, and induced abortion in a case in which the autopsy revealed cancer of the stomach. Beau erred in diagnosis in a case in which the *post-mortem* examination showed tubercular meningitis as the probable cause of the vomiting, and Cazeaux narrates the history of a fatal case of alleged hyperemesis of pregnancy where the autopsy disclosed tubercular peritonitis and the abscence of pregnancy.

But a mistake in diagnosis is possible even in the other direction, that is, pregnancy may be denied by the patient or not be expected by the physician, and thus be overlooked as shown in a case recently reported by A. H. Buckmaster.[3] The patient, a governess in a respectable family, was supposed to be suffering from vomiting due to ulcer of the stomach, and was under treatment two months when she died. In making the autopsy a five-months' fœtus was found, but no

[1] Praktischer Arzt, 1882, p. 261.

[2] American System of Obstetrics, vol. 1, p. 411, 415.

[1] Faggard, American System of Obstetrics, vol. 1, p. 416.

[2] l. c.

[3] *American Journal of Obstetrics*, 1890, p. 1381.

ulcer whatever, nothing to account for death except the uncontrollable vomiting of pregnancy.

These cases need no comment. I have cited them to demonstrate both the difficulty and the importance of an accurate diagnosis.

It is generally stated that the prognosis of hyperemesis is bad, but this, apparently, is by no means correct. As Faggard justly remarks, "it is doubtful whether an authentic fatal case of this kind is recorded. Such cases have never been seen by observers of the largest experience."

Even the graver forms of this disease yield, as a rule, to rational treatment, unless they are complicated by serious pathological conditions which of themselves render recovery impossible. Pregnancy may aggravate such cases, and perhaps hasten death, but it must be admitted that there exists no causative relation between gestation and the lethal issue.

A great variety of remedies—still increasing in number every year—have been recommended by different writers. These remedies have proven satisfactory in some cases, but failed entirely in others. This uncertainty of the various methods of treatment, the often but little annoyance caused by the milder forms of vomiting, and the experience that in many instances spontaneous cures occur, have led to the view that interference is not required unless the case presents a more serious aspect. Such advice given in text-books, is at first sight, surprising. Even in mild cases of gastric trouble a careful examination is indicated, and should be insisted upon by the medical attendant to determine the cause of the disorder, its dependence upon physiological or pathological conditions. Are the generative organs found to be normal? Are there no indications of diseases of other vital organs, especially of the stomach? Is the effect of the vomiting upon the general health but insignificant? It may then be decided whether it be a wise plan to irritate the stomach by various drugs, which, as known from experience, are of so limited value in this reflex affection, or to desist from treatment. It is in this sense, I take it, that such advice has been given, and it is under these circumstances that it deserves recommendation. Nevertheless, such statements in text-books are misleading, fortunately, but to the superficial reader.

While mild cases of vomiting do well without treatment, diet and regulation of the bowels, are usually sufficient to render the gastric disturbances tolerable, but the persistent vomiting demands our earnest attention.

Hyperemesis, a reflex neurosis, is due either to physiological changes in the uterus, distension by the growing ovum, or to pathological conditions complicating pregnancy. If we exclude co-existent diseases of the stomach, which will be considered later on, it must seem plausible that the treatment should be directed against the causes and not against the symptoms of the gastric disorder; that is, against the uterus, and not against the stomach. The stomach is not the diseased organ. Nausea and vomiting of pregnancy are only the symptoms of some functional disturbance of the nervous system, originating in the uterus, like the nausea and vomiting of sea-sickness, an analogous disease, dependent upon the motion of the ship. For this reason gastric medication must fail to favorably influence hyperemesis; for this reason none of the innumerable remedies recommended are found to be reliable—some of them are worse than useless.

There are three classes of cases, however, which sometimes may be relieved by the administration of drugs, viz.: 1st. Women who, prior to gestation, have been afflicted with disease of the stomach, as chronic gastritis and gastric ulcer; 2d. Women of an unusual irritability; and 3d. Hysterical women.

In cases of the first category sub-nitrate of bismuth, bicarbonate of sodium, Carlsbad water, oxalate of cerium, the tincture of nux vomica, etc., may be tried and may sometimes be found of decided value, while the nervines and sedatives may give relief to nervous and hysterical women. Opium and its preparations, the bromides and chloral, ether administered by the mouth, by the rectum, or hypodermically, as the circumstances require, are the medicinal agents which have the best reputation, and which, in these cases, sometimes successfully depress the reflex irritability, and thus alleviate the symptoms. Blisters, the application of chloroform, ether, and of the faradic current to the epigastrium, of the ice-bag to the dorso-lumbar region have been tried and have afforded relief in some instances.

The resort to local treatment is indicated in all those cases in which a morbid condition of the uterus has been made out. Retroflexion and retroversion are to be corrected, and, if necessary, the uterus is to be retained in position by a suitable pessary. A congested vaginal portion may be relieved by scarifications, while the application of carbolic acid, or of a 10 per cent. solution of nitrate of silver to the eroded cervix will

often prove successful in mitigating the distressing symptoms. Faggard[1] states that in Vienna a 10 per cent. solution of nitrate of silver is employed in all cases of severe vomiting, irrespective of the condition of the vaginal portion. "The weight of testimony in favor of this simple procedure, collected from innumerable sources, is so great as to make its employment absolutely obligatory before resorting to more radical methods."

Dilatation of the cervix—Copeman's method—has proven successful according to some writers, while others report negative results. In the only case of severe vomiting which I have observed it had a most remarkable effect. The nausea disappeared instantly, but only for a few hours. The method was again applied, but no result was obtained the second time.

Horwitz [2] recommends that in the severer cases of vomiting the patient should be placed at rest in bed in the horizontal position, that the room be darkened, and that, if the stomach rejects everything, rectal alimentation should he resorted to. Crushed ice to quench the thirst is allowable. I can fully endorse this plan.

When these various methods have failed, when the vomiting actually is uncontrollable and seriously endangers the patient's life, the induction of abortion or premature labor is indicated, and will, if done in time, to a certainty, save the woman.

Society Reports.

ALLEGHENY COUNTY MEDICAL SOCIETY.

Scientific Meeting, June 16th, 1891.

T. D. DAVIS, M. D., PRESIDENT, IN THE CHAIR.

Dr. Blume read a paper on the Vomiting of Pregnancy. See page ——.

Dr. LeMoyne:—I agree with the doctor that in a great many cases vomiting is largely due to abnormal conditions of the parts. I had the same experience with obstinate vomiting in this condition, and found it often was relieved by the correction of some erosion or displacement, although I do not believe that that always caused the condition. The doctor has very wisely laid a great deal of stress upon the matter of careful examination of the parts where these conditions exist, with the view of ascertaining and removing any such abnormal conditions.

Dr. Lange:—An excellent paper the doctor has given us; it deserves our thanks. It is very comprehensive and thorough, and there is nothing in it to which any one can raise any objection, except perhaps this: the rectification of displacement of the uterus during pregnancy by the use of pessaries. That, in my experience, is impossible. In an impregnated uterus, and perhaps in a uterus which is not impregnated, I think that it is beginning to be thoroughly understood that the pessary is a means of absolutely no value, sometimes of great discomfort, and occasionally of some danger. The only pessary which may perhaps be sometimes of service is the ordinary balloon pessary, a rubber globe which is ballooned up by inflation with air or water. This—in my experience—prevents the descent of the uterus in some cases. The stem pessary of Dr. Kinloch may also be an exception to the rule, that pessaries are useless for uterine displacement; this can be used of course only in the unimpregnated uterus, and may deserve consideration in flexions. Among the remedies which the doctor has mentioned are the most valuable, but I failed to hear calomel. Calomel has been, in my experience, a most valuable remedy. In proof of this, I had a lady under my care who had twice suffered abortion at four months, at the hands of most eminent gentlemen in the profession, because of pernicious vomiting, and their conclusion was that she would die. At her third pregnancy she and her husband again concluded that she would die, and she certainly looked like it. Her adipose tissue had disappeared, her muscular system had atrophied, her belly was distended and tender, she was blanched, her pulse was small and rapid, she had an elevated temperature, and her tongue was red and dry. I gave her calomel, one-eighth grain every three hours. In 48 hours she was able to retain *some* food, in two weeks she left her bed, still sick, still vomiting, but able, despite her vomiting, to take a sufficient amount of food to maintain life and improve her condition. This is one instance where calomel exerted a very marked good effect, and this was not due to any organic disease of the stomach; sufficient proof of this is the fact that, before her pregnancy she was always well, and the same was true before her previous pregnancies. She is the wife of a druggist in this city. I give calomel frequently in the vomiting of pregnancy,

[1] l. c.

[2] l. c.

but in the case related it strikingly exhibited its power. The doctor mentioned a remedy with which I have no experience in the vomiting of pregnancy, but of which I have heard much good. I have always understood that the introduction of that method belonged to a Pittsburgher, namely, Dr. M. O. Jones, of Wylie avenue, who informed Dr. Marion Sims of it; the latter teaching it in Paris in 1870. I have always understood that dilatation of the cervix and the separation of the membranes a little way up, which is said to be a very excellent remedy for the ordinary sickness of pregnancy, is the method of Dr. Jones.

Dr. Dagette:—The doctor speaks of increased temperature being one of the symptoms of pernicious vomiting. Is that one of the signs which arise before death?

Dr. Blume:—In my case, after about two weeks had passed fever commenced, and after another week had passed, the woman still in bed, her fever went up to 103° and remained at that height for several weeks, and this case recovered without any medicine whatever, having nothing but absolute rest. She was in bed about six weeks.

Dr. Batten;—I have had two cases of severe vomiting of pregnancy. One was in the person of an unmarried woman. At first I could not imagine (she was supposed to be a virgin) what the trouble could be. She was emaciated and her eyes were sunken; after two or three days my suspicion was aroused. There was no fever. The case went on for two weeks under my treatment with all the remedies that I knew of, excepting local applications, and from the fact that the young woman made the request that I keep her mother in darkness as to the cause of the trouble, I was prevented from making any local applications. But after exhausting everything I returned to blackberry brandy and stopped all medicine; after giving her the second dose, the vomiting ceased and she recovered after taking the remedy for some three weeks. Another case I had in 1882. A woman had seven children and never had any vomiting whatever; in this case the vomiting appeared at the end of the first month and continued right along to the end of the fifth month, and all remedies seemed to have no control whatever of the trouble. However, at the end of the fifth month, after I had given up the treatment, she was not so prostrated as the other case. It was a twin pregnancy, and when that woman was delivered one child was fully developed and another was dead, having died evidently at about the fifth month, about the time the sickness left her. The dead fœtus was in the neighborhood of five or six inches long. The woman ran on to full time.

Dr. Connell:—One point the doctor alluded to, the use of nitrate of silver. My attention was first called to the use of this remedy by Dr. Jones, whose name has been mentioned, and I think to him belongs the credit of the introduction of nitrate of silver treatment. In the *Journal of the American Medical Association*, of two years ago, there was a paper written by a gynæcologist or obstetrician of Washington, whose name I cannot now recall, and in reply to that, Dr. Jones gave his experience in the use of nitrate of silver, and alluded to having spoken to Dr. Sims about it. Dr. Jones used that many years ago, and it is only a few years since the attention of the profession was called to it. I have used it and had better results with the application of the nitrate of silver than with any other remedy.

Dr. Huselton:—I want to say a word in defense of the pessary. I think that we have displacements of the uterus in the early stages of pregnancy. I also believe it is possible to rectify them and maintain them in proper position by the use of Thomas' retroversion pessary. I have certainly replaced retroverted uteri and maintained them in position with this pessary. With regard to treatment, as has been properly stated, I do not know of any one remedy that will relieve all cases. I remember one very aggravated case I had a number of years ago, in which I tried everything that I could think of, which I afterwards succeeded in relieving entirely with a large dose of chloride of potassium.

Dr. Green:—I have no criticism to offer on the paper. I wish to relate a case of vomiting during pregnancy which came under my observation on the sixth of this month. The lady was three months pregnant. She had been treated by two or three physicians previous to her application to me. I do not know what remedies she had taken, but no relief had been afforded by any of them. I found her very much prostrated, and for five or six weeks she had had difficulty in retaining food sufficient to afford nourishment; she had not rejected all the food and was still able to go about. An examination of the uterus discovered it to be displaced, retroflexed and apparently bound down with adhesions, and abortion was about to take place. There was evident hæmorrhage, which had begun some time the previous night. She miscarried on the second day after I saw her. Again, I wish

to say a word in regard to the use of the pessary. Whilst I have no doubt that the pessary may in certain cases do some damage, I have seen what I supposed was very great benefit, in the use of the soft pessary; especially in cases coming under the class where displacement can be assigned as the cause, I have seen permanent relief. I wish to say a word about the damage sometimes done by pessaries. About six weeks ago I delivered a lady at term. On making examination, I found a common ring pessary, hard rubber. I said: "How long have you worn this?" She replied, "About five years." Six years previously she had given birth to a child and immediately after that this pessary had been placed in the vagina and remained there ever since. I removed the pessary, and saw that it had done no harm. This, I presume, does not very often occur. It shows that the pessary does not always do very great damage.

Dr. Werder:—I have no personal experience in this matter. I have had a large number of pregnant women under my observation, but have never seen a case of serious vomiting of pregnancy. There is no doubt that vomiting of pregnancy is a reflex neuroses—of course that is not saying very much—but I think in a large number of cases it is a form of hysteria. A number of cases have been reported which were treated as hysteria and got well under that treatment; before that, other methods of treatment were employed without any benefit whatever. I think there is no doubt that a large number of cases are hysterical in their character. In regard to pessaries, I have no doubt that pessaries are used very much, and very many women would be far better without them, but there are exceptions to that. I think a good many women would would not feel comfortable without the pessary. If the uterus is properly replaced and in normal position and a pessary is introduced, where there is no inflammatory condition of the pelvis, in many cases it does a great deal of good. Many of these women are very comfortable wearing a pessary for months, and women come to me with pessaries where there is no flexion at all, where there is no displacement of the womb, and sometimes there is a displacement, but it has not been reduced at all, the uterus is retroflexed just the same as it was before the pessary was introduced. In pregnancy I have had probably two or three cases of this class, and am certain that these women suffered before the uterus was put in position and before the pessary was introduced, and the benefit they derived from the pessary was also very great.

Dr. Davis:—Dr. Blume certainly covers the ground in every particular very thoroughly, and there is one point that he dwelt on and that is, as he said very aptly, you would think that the diagnosis of pregnancy was a very easy thing, and yet I believe this is an important point of the question for discussion to-night. I believe that on that hangs the treatment, and that is the reason why such various treatments are recommended, and why in some cases one treatment acts very favorably and another treatment is of no benefit. I think it stands to reason that if pregnancy is the cause of this vomiting, calomel would have very little effect. I think it stands to reason that if there is no (or very little) trouble of the uterus, but if there is a disease of the stomach, calomel would be very beneficial. And therefore, while in one case I would expect benefit from it, in the other, it would be *nil*. On one occasion I was called to see two ladies, neighbors, both suffering with morning sickness of no aggravated form, but enough to give them great discomfort. To the one I prescribed to the best of my judgment what was wanted, bromide of potash. To the other I prescribed hypophosphites in an acid solution. I remember distinctly, they were given in quite large bottles; they each used about half of the bottles; which were given within a day or two of the same time, and were none the better, but rather grew worse. Talking, as neighbors will do, over the back fence, they compared notes and traded bottles, and in a very short time both were completely relieved. The explanation is simply this, that the acid and the hypophosphites in the state of the one stomach was just what was needed, while the nervine and the alkali was just what the other needed. I believe that as far as we possibly can we ought to ascertain what is producing this particular sickness in this particular woman, and not take it for granted that all morning sicknesses are from identically the same cause. In my experience I have seen a great many severe cases. Pregnancy acts differently in different persons, and the thing that would remedy one case would be useless in another. I have seen a good many that I considered very severe cases, but it has been my lot to see one that was of unusual severity, at least the result shows it to have been so.

A lady, whose medical history I know comparatively little, came under my observation for four visits. She was several months

gone in pregnancy and was suffering with profound morning sickness. A particular characteristic of it, as I noticed in these four visits, which extended over about ten days, was ptyalism. In fact in my presence she was so overcome that she had to vomit. As I was seeing the case in connection with another physician, a friend and relative, who had been there about an hour before my last visit, I did not push the investigation at that time as I had no particular alarm. That was on Thursday evening. It had been the case for the husband to drop in to tell me how she was feeling, and to telephone if she was feeling unusually bad. Thursday evening I saw her last. Sabbath morning the physician dropped in and told me he had called and found her in a very critical condition. It seems that on Friday morning a lady physician had been called in, and on Friday and Saturday had seen her in this condition of increasing irritation of the stomach, and vomiting of some cloudy fluid, and on Sabbath morning when her friend, the physician, saw her, she was in a critical condition, and in spite of dilatation and everything else that could be accomplished on Sabbath night, she died on Monday. I felt impressed at the time and more impressed upon hearing Dr. Blume's paper tonight, that a *post mortem* examination should have been held on the case.

Dr. Kœnig:—It seems to me that in looking for a specific cause of vomiting in pregnancy, we overlook the fact that the nervous system is very powerfully affected by the pregnancy itself. Vomiting in pregnancy is so common that it cannot be due to a gastric lesion; it must depend on an irritation of a nerve ganglion that transmits it to the brain. It has been said that it is impossible to explain why the peculiar motion of a ship should produce vomiting; I have never heard it explained; I do not suppose we can explain it; nor can we explain satisfactorily how the vomiting of pregnancy is produced. It would appear to me that the action of all remedies that are of any value can be accounted for in two ways, one a counter-irritation, which would explain the action of pessaries; explain the action of nitrate of silver when applied to the os; and would explain the action of dilatation. By these an irritation is produced which diverts the attention of nature from the disturbing causes which produce vomiting. The artificial irritation at the os distracts the attention of nature from the other point of irritation, and the vomiting ceases. The other action to which I refer is an anæsthetic action applied to the terminal nerve filaments of the stomach. I have recently seen a remedy possessing this action recommended, which Dr. Blume did not refer to in his paper, namely, menthol, in two grain doses. Menthol is a powerful anæsthetic, and by deadening the sensibility of the nerves of the stomach, I can very readily conceive how the vomiting might be arrested. We all know the tendency of disease is toward recovery, and if vomiting in pregnancy is a disease, it is especially true in this case. That fact accounts for the numerous remedies that are said to be corrective. That fact might account for the re-results that followed the exchange of remedies in the case alluded to by the President. A large majority of cases recover without medication.

Dr. Duff:—I would make the distinction in discussing this subject between simple vomiting during the ordinary morning sickness of pregnancy, the more persistent and aggravated vomiting, and the pernicious vomiting. There is a conservatism of nature in the first class; indeed, some observers declare this to be so, inasmuch as women thus affected go through their pregnancy as a rule better than do those who are not. The pernicious vomiting due entirely to pregnancy without complications is, I think, a rarity. The failure up to this time, of observers to agree upon any common cause of vomiting during pregnancy is *prima facie* evidence of varying causes. Our treatment, therefore, should depend upon a rational consideration of each case presented to us. In the cases of Dr. Davis, I do not think that when the exchange of medicine was made the patients were about to get well. I think the exchange was a happy one, inasmuch as the then treatment was in accordance with the acid or alkaline condition of the secretions. I did not notice that the doctor said anything about electric treatment. I think it is sometimes efficacious. Another mode of treatment is the application of cocaine to the cervix uteri. Injecting it into the tissues of the cervix, I think gives the best results, although painting with a 15 per cent. solution may answer as well.

Dr. Blume: It has been said, that pessaries should not be employed to retain a gravid uterus which has been retroflected. Vomiting, as a rule, occurs during the first few months of pregnancy; the replaced uterus will at so early a period of gestation often need a support or become again retroflected. We have two means to retain the

uterus in its normal position: 1st. Tampons; 2d. Pessaries. Tampons must frequently be changed, are therefore inconvenient and even injurious, as they may incite contractions and thus produce abortion. A suitable pessary does no harm under these circumstances, as I have seen in many instances. Stem-pessaries cannot be considered here. In my opinion they should never be used. They are certainly contra-indicated during pregnancy.

Calomel has not been mentioned by me because it failed entirely to influence the gastric disturbances in my cases. It acts as a simple purgative, and is indicated or may be tried in cases complicated with costiveness.

Gastric medication is applicable only in the milder forms of vomiting. Cases of pernicious vomiting, where everything is rejected by the stomach, cannot be relieved by drugs, be they given by the mouth, by the rectum, or hypodermically. It may sometimes be possible to stop the vomiting for a few hours, but, as a consequence, the nausea becomes so intense that the patient feels relieved as soon as the vomiting commences again.

One gentleman said that dilatation of the cervical canal has been practiced many years ago. This method, first recommended by Copeman, justly bears his name: Copeman's method. Dilatation of the cervix, if carefully effected, does not interrupt pregnancy. But if the internal os is dilated, or, as one gentleman recommended to-night, if the membranes are detached around the internal os, abortion will probably be the consequence.

The view, expressed by one gentleman, that patients with the ordinary vomiting do better at term than those without this disorder, is at least surprising and by no means supported by experience.

In conclusion I wish to *touch* a point which I have not discussed in my paper, viz.: when has the vomiting become uncontrollable, and when is the induction of abortion indicated? This question is a very important one, for if we wait too long the woman will in all probability lose her life. Uncontrollable vomiting is apparently very rare in our vicinity. The case reported by Dr. Davis is the only one I heard of in this city, and I regret that no autopsy has been made. In New York where this subject has been discussed in the Obstetrical Society last fall, pernicious vomiting must be a rather frequent complication, as almost every speaker reported cases where artificial abortion had to be induced to save the patient. Several women died, the evacuation of the uterine contents having been too long delayed. All the speakers agreed that abortion should be induced before the condition of the patient had become critical.

I believe that no precise rules can be given as to when to empty the uterus, and that every case must be treated according to its peculiarities. When the various methods of treatment have been tried in vain, when the patient becomes more and more emaciated, it seems hazardous to wait for the most extreme degree of exhaustion. A consultation should be held and the induction of abortion, the last chance of saving the woman's life, should not be postponed too long.

Dr. LeMoyne: In December, 1890, I was requested to see a woman in consultation, who was supposed to be six and a half months pregnant. She had been delivered of two children at full term previously, and had one miscarriage at about six months. For about two weeks she had noticed some swelling of the lower extremities, and a specimen of her urine, which was procured the evening previous to my attendance, was found to be so largely composed of albumen as almost to solidify by boiling. She had taken her evening meal with her family, between six and seven o'clock, but while at the table experienced considerable pain in the abdominal region, and was compelled to retire before finishing. She was assisted to bed, and medical attention procured. Between that time and six o'clock the following morning she had three very decided convulsions. At six o'clock, A. M., her expression was rather dull, but she responded intelligently to questions, and recognized persons who addressed her. The mouth of the uterus was sufficiently patulous to admit the point of a finger, which readily detected the body of the fœtus. No instrumental apparatus being at hand for the dilatation of the neck of the uterus, suitable appliances were immediately sent for. But the patient's condition being such as to promise an early return of the convulsions, admitted of no delay, and dilatation was practiced with great perseverance and determination by means of the fingers. The success of this method was such that when the Bames dilators and parallel steel blades arrived, the divulsion was beyond their capacity, but not sufficient to admit the hand. At 9.00 A. M., no relief being experienced and every moment seeming to endanger the patient's life, the long obstetrical forceps were resorted to with the intention of either grasping the fœtus in their blades and forcing it away, or

effectually dilating the mouth of the uterus by delivering the forceps in the locked position. The mentioned plan failed, as no engagement could be procured; but with little difficulty the blades were successfully introduced, locked, and gradually delivered, dilating the uterus sufficiently to enable the hand to enter, seize the thighs of a breech-presenting fœtus, and accomplish its speedy delivery. Two modified convulsions occurred after the delivery, and five severe ones previous to it. The normal function of the kidneys was soon re-established, and a very satisfactory recovery soon followed.

I offer the history of this case believing it to illustrate a very valuable and nearly always practicable method of dilating the uterus, and thinking that it may be new to others as it has been to me.

Dr. Duff: The simple introduction of the forceps through the os, locking them without grasping any portion of the child, and withdrawing them for the purpose of dilatation, it appears to me would be impossible except where the head was still above the superior strait, where there was the same condition in a breech, or where there was an oblique presentation. I have frequently introduced the forceps where the os was only dilated sufficiently to admit of their introduction with the double purpose of dilating and of traction. I think Dr. LeMoyne's method justifiable.

Dr. Blume: If delivery by the head should be impossible, I think it is safest to turn by the hand and extract; a woman could be delivered in that way. I do not know in this case whether the child was living or not. I think we have other measures which should be tried first; for instance, anæsthesia.

Dr. LeMoyne: The dilating of the os, I stated in my paper, was done by physical means. I introduced my fingers, first one finger and then another finger beside it, and finally two fingers and the thumb, until I reached a degree of dilatation that would admit the blades of the forceps consecutively. I also stated that, having no suitable instrument for the purpose when the case was thrust upon my treatment, I had to resort to natural means, and by the time the instruments arrived by which I expected to accomplish dilatation, I had already dilated to a sufficient extent with my fingers to introduce the blades of the forceps, and my diagnosis of the position being still uncertain, I introduced the forceps with the intention of seizing any part which might present. It strikes me as very fortunate thought, and resulted certainly very favorably.

Selected Formulæ.

FORMULÆ FOR SOZOIODOL.

Sozoiodol in the following combination will be found a valuable dressing for burns and bruises:

℞
Sozoiodol of potassium..... 3 grammes.
Lanolin.....30 grammes.
M.

The following formula may also be used advantageously in similar instances:

℞
Sozoiodol of potassium..... 5 grammes.
Talcum.....20 grammes.
M.

In various eczematous diseases of the skin sozoiodol of soda will be found of value.

℞
Sozoiodol of soda..... 2 grammes.
Talcum.....20 grammes.
M.

In similar cases the following is equally as useful:

℞
Sozoiodol of mercury..... 0.5 gramme.
Lanolin.....25.0 grammes.

Finally the drug has yielded excellent results in the treatment of blennorrhagia when given as follows:

℞
Sozoiodol of zinc..... 1.5 grammes.
Distilled water.....100.0 grammes.
Tincture of opium ..... xx gtt.
M.

—*Journal de Méd. de Paris.*

FORMULÆ FOR NAPHTHOL.

The following formulæ for naphthol will be found valuable in the treatment of acne:

℞
Camphorated naphthol, Resorcin, Salicylic acid } aa..... 5 grammes.
Starch, Vaselin, Precipitated sulphur } aa.....25 grammes.
M. et fiat pasta.

The above is recommended by Dr. Besnier.

Another naphthol paste, recommended by Lassar, is the following:

℞
Naphthol.....10 grammes.
Washed sulphur.....50 grammes.
Green soap, Vaselin } aa.....25 grammes.
M. et fiat pasta. Sig. To be left in place after application from one-half hour to one hour.

In cases of inflammatory acne, Dr. Brocq uses the following with success:

℞
Naphthol B.....1 gramme.
Washed sulphur.....2 grammes.
Pulv. oxide of zinc.....2 grammes.
Lanolin.....5 grammes.
Oil of sweet almonds.....7 grammes.
Extract of violet, q. s.

For chronic eczema, Brocq recommends this salve:

℞
Naphthol B.....1-2 grammes.
Vaselin..... 50 grammes.
M.

—*Journal de Méd. de Paris.*

ACUTE AND CHRONIC CATARRH.

℞
Terebene.....ʒiij.
Ol. cinnamoni.....ʒss.
Gum acaciæ pulv.....ʒv.
Sacch. alb.....ʒiv.
Tinct. card. co.....ʒiij.
Syrup simpl.....ʒx.
M. Sig. A teaspoonful three or four times a day.

—*The Prescription.*

SCABIES.

Dr. Cantrell gave the following prescription in a case of scabies:

℞
Beta naphthol.
Sulphur, aa.....ʒij.
Adipis.....ʒiv. M.
Sig. Apply to affected part.

Also frequent bathing; and the clothing is to be scalded.—*Coll. Clin. Rec.*

GOUT AND RHEUMATISM.

There can be no possible doubt that, despite the different opinions in regard to the cause of gout and rheumatism, alkalies exercise a very good action, and tend to relieve the system of that hyper-acidity which seems to be always present. In this administration of alkalies, some care is to be exercised in order to avoid those disturbances of the digestive system which may come on as a result of their continued administration. Among the best of the alkalies is lithium and its salts. Some, however, contend that its combination with other alkalies makes its action more sure and effective. A combination devised by an eminent practitioner is as follows:

℞
Lithium benzoate.....12.823 grains.
Lithium bicarbonate.....13.784 grains.
Potassium bicarbonate.....10.000 grains.
Sodium chloride.....10.000 grains.
Carbonated water.....16 ounces. M.

This makes a palatable, effervescing mixture which is very grateful to take, as well as effective in action. Of course, it is impossible to prepare this extemporaneously. Dr. Enno Sander has made the above in his usual thorough manner, and has named it Benzoated Lithium Water. Being palatable, it is taken by patients with a certain relish, and the peculiar taste of the alkalies does not manifest itself, being completely covered by the carbonated water.—*Weekly Medical Review.*

BALDNESS.

In falling of the hair, a writer in the *Lancet* recommends the following, a little to be rubbed on every night:

℞
Tinct. jaborandi.....fʒiv.
Lanolin.....fʒiij.
Glycerin..... ʒij.

PRURITUS HIEMALIS.

Corlett recommends the following topical applications in "winter itch":

℞
Resorcin.....ʒj.
Glycerin.....fʒij.
Aquæ, ad..... .....fʒiv.
M. Sig. Apply.

℞
Menthol..... ....ʒiiiss.
Glycerin.....fʒij.
Aquæ, ad.....fʒiv.
M. Sig. Apply.

℞
Ichthyol. ammon. sulph.....ʒi-ij.
Glycerin.....fʒij.
Alcohol.
Aquæ, aa q. s. ad.....fʒv.
M. Sig. Apply.

—*Boston Med. Journal.*

AMENORRHŒA.

A writer in *Revue Med.-chir. des Mal. des Femmes* prescribes:

℞
Bichloride of mercury.....3 grains.
Arsenite of sodium.....3 grains.
Sulphate of strychnine.....1½ grains.
Carbonate of potass. } .....each 45 grains.
Sulphate of iron }
Make into 60 pills and give one pill after each meal.

—*Ex.*

SPASMODIC COUGH.

Dr. Brubaker recommends the following prescription for spasmodic cough:

℞
Acid. hydrocyan. dilut.....fʒj.
Tinct. sanguinariæ.....fʒiv.
Syrup, senegæ.....fʒss.
Syrup, tolu.....fʒij.
Aquæ lauro cerasi, q. s. ad.....fʒviij.
M. Sig. fʒj t. d.

—*Med. World.*

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PROFESSOR OF PHYSIOLOGY, UNIVERSITY OF PENNA.,
EDITOR AND MANAGER.

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Make communications as short as possible.

NEVER ROLL A MANUSCRIPT! Try to get an envelope or wrapper which will fit it.

When it is desired to call our attention to something in a newspaper, mark the passage boldly with a colored pencil, and write on the wrapper "Marked copy." Unless this is done, newspapers are not looked at.

The Editor will be pleased to get medical news, but it is important that brevity and actual interest shall characterize communications intended for publication.

LEADING ARTICLE.

INTUBATION OF THE LARYNX.

The operation of Intubation of the Larynx, has of late awakened such great interest among surgeons and pædiatrists both here and abroad, and has found such extended adoption, that a brief review of the advancements made, the successes achieved, as well as the failures, cannot fail to be of great interest to our readers; and more than this, because the operation is eminently an American one.

Although a comparatively new procedure, the number of intubations that have been performed are truly startling, Dr. Lovett, of Boston, having been able to collect the histories of 21,853 cases. Unlike many recently introduced surgical and therapeutic procedures, which, while heralded with flourish of trumpets and the sounding bravos of the all too optimistic members of our profession, have been finally relegated to a position of acknowledged worthlessness, made only more bitter for their advocates by their ephemeral glory—unlike these, intubation of the larynx came upon us modestly, promising but little, starting, as it were, at the bottom rung of the ladder, only, however, to mount with ever increasing swiftness until now, although still in its youth, its success has been so firmly established that the foremost of the profession, in America, France, Germany, England, Italy and elsewhere, are practicing the operation, and already the name of O'Dwyer has been made memorable.

The REPORTER has not been silent on the subject. In our issue for May 9, 1891, we published the report of Dr. J. Mount Bleyer, as it appeared in the *Archives of Pœdiatrics*. Dr. Bleyer gives the report of 512 cases of intubation of the larynx for croup and diphtheria, operated upon between 1886 and 1890, out of which 37 per cent, recovered. Among the causes of death in the 322 fatal cases, extension of the false membrane occurred in 67 cases; bronchitis in 45 cases; pneumonia in 41 cases; broncho-pneumonia in 40 cases;

sepsis in 39 cases; and asphyxia due to closing of the tube by false membrane in 2 cases. In the article referred to, the author strongly emphasized the necessity for making a forced or normal laryngoscopic examination before operating, as the differentiation and diagnostication of other laryngeal diseases may be made out, and the extent of the diphtherial or croupous lesion seen. The tube, says Bleyer, should be extracted daily for the purpose of removing any accumulation of loose membrane, tenacious mucus or pus. "When the tube has been extracted irrigate the posterior nares, pharynx, larynx and entire surface with a mild solution of bicarbonate of sodium." Much of the success depends upon the judgment of the operator in selecting a suitable tube. When loose membrane exists, Bleyer recommends a tube of thinner metal and larger calibre, which should be left *in situ* six hours or more. "The tube once in place," continues Bleyer, "the most vital portion of the treatment must be next carried out, namely, irrigation of the affected parts. A number 8 soft rubber catheter attached to a fountain-bag syringe, is passed into the nostrils alternately,and a solution of peroxide of hydrogen (5 ounces of a 15 volume solution, chemically pure, in 12 ounces of water) is passed through; after this has been done, the next step is to wash out the mouth, pharynx and larynx. If necessary a gag should be used." Dr. Bleyer then gives a brief summary of the results of the operation, finding that German authors have obtained 31 per cent. recoveries in 5,795 cases: German Hospitals had then recorded 30 per cent. recoveries in 3,063 cases. French surgeons had tabulated 9,242 cases with 24 per cent. recoveries. In the Boston City Hospital, according to Dr. Lovett, of Boston, between 1884 and 1887, 327 operations yielded 29 per cent of recoveries. Out of the 21,853 cases collected from all sources by Dr. Lovett, and previously mentioned in this article, 26½ per cent. of recoveries were obtained.

In the Reporter for June 20, 1891, we referred editorially to this subject, under the heading of "Tracheotomy vs. Intubation." At that time we took a most conservative view of the matter, and our conclusions then drawn must probably be modified by the weight of the extended experiences of well-known clinicians, as well as the unmistakable importance of the most recent and unbiased statistics.

Again, in the Reporter for August 1, 1891, we published an abstract of an article by Dr. Hal Foster, which appeared in the *Kansas Medical Journal*, which is nought but an unqualified enconium of the operation, based upon personal experience and extended research.

Finally, in the Reporter for August 8, 1891, there appeared a communication on this subject by Professor F. Massei, M. D., of Naples, Italy. Dr. Massei's interesting and valuable article is too fresh in our readers' memories to necessitate of our recalling even its most salient points. The author's frankness in acknowledging himself firmly opposed to the introduction of intubation into Italy on purely theoretical grounds, together with his present warm support of the procedure, the result of personal and practical experience—these admissions alone, coming from the source they do, carry a weight with them that will surely strengthen the already firm foothold that the operation has won for itself. Professor Massei speaks, in his article, most highly of Dr. Egidi, of Rome, whom he also confesses to have strenuously opposed at the outset. Dr. F. Egidi, without doubt, deserves the title of "pioneer" of the operation of intubation in Italy. In an exhaustive article on the subject, which appeared in the *Giorni Internaz, dell Scienz. Med.*, March 15, 1891, he states that he performed his first intubation in April, 1889, and that this was the first operation of the kind performed in Italy. Dr. Egidi cites the histories of 30 cases, of which 27 were in children and 3 in adults. Of the children, 21 were cases of primary, or simple croup, 2 of croup consecutive to diphtheria of fauces, 3 of croup following measles, and 1 of stenosis following the use of a tracheotomy tube. The youngest child was ten months old, 17 were between one and three years, and 9 between three and five years. Omitting the case of stenosis

after tracheotomy, of the remaining 26 cases, 4 recovered, all of primary croup. Introduction of the tube was generally easily performed although in his first case the tube was only inserted after seven attempts. It happened in two cases that some false membrane was pushed down before the tube, but which was coughed up when the tube was removed. No great difficulty was experienced in feeding the children. Coughing up of the tube soon after introduction occurred in three cases, but as soon as a tube of a larger size was inserted there was no further trouble. The tube in Egidis' cases was worn for periods varying from twenty-two hours to thirteen days. Extraction of the tube was done with the extractor in four cases, but Egidi prefers —as does also Massei—to leave the thread *in situ*, and to remove the tube by it instead of by the extractor, the latter procedure being very difficult. In only one case was an erosion from pressure of the tube found *post mortem*.

Regarding Massei's results, they are more satisfactory even than those of Egidi. Out of 11 intubations he obtained 5 recoveries, or $45\frac{5}{11}$ per cent. More particularly in 9 cases of croup, 6 recoveries, or $66\frac{2}{3}$ per cent.; in two cases of laryngitis stridulus, 1 recovery, or 50 per cent. Furthermore, Massei states that in the five cases that ended fatally intubation was done by the way of an experiment, as the patients were all in a very bad condition, and presented no hope of recovery.

If the results of tracheotomy are compared with those of intubation we cannot fail to observe that there are some important advantages in intubation. It is a well-known fact that erysipelas or traumatic diphtheria not infrequently follows the operation of tracheotomy. Thiersch, out of 697 cases of tracheotomy, observed 74 cases of traumatic erysipelas, 50 of which resulted fatally.

There is undoubtedly more or less difficulty in feeding the subjects after intubation, but the majority of writers state that they have been able to overcome this difficulty without serious trouble. Ice may be given to quench the thirst, and nutritive enemata resorted to should the case indicate it.

The theory has been advanced by Schwalbe, and others, that the tube in pushing down before it false membranes, only adds to the faulty ventilation of the lungs and in this way can very possibly be the cause of pneumonia. This possibility should not be forgotten. A single introduction of the tube occasions violent coughing, which leads to the expulsion of mucus and false membrane. This fact was also observed and made use of by Bleyer, and he found one or two consecutive introductions of value. Indeed, Francis Huber, basing his opinion upon this fact, has established a special treatment in bronchial-croup, which he designates as "Intermittent Intubation." Such, or even a similar action is unobtainable in tracheotomy. The statistics of the two operations, tracheotomy and intubation, as compiled by Ranke, do not show that pneumonia is any more frequent after intubation than after tracheotomy.

The aspect might, perhaps, be a different one in cases where pulmonary disease already existed. Here, it is very possible, that the calibre of the tube would not suffice to allow of the increased respiratory effort demanded by the disease. In event of such complications Escherich is right in considering the procedure contra-indicated.

It is of greatest importance that the operation should be conducted without the use of force, viz., in the insertion of the tube. By neglecting this point, serious injuries to the membranes and parts, inviting septic infections, can be made; and apart from this, the possibility of making a false passage. It is, therefore, of high importance, that the operator should thoroughly understand and have had practice in the technique of the operation, and this experience should not be gained from the living subject but from the cadaver.

The value of experience will be doubly appreciated after a careful study of the results of various operations, when it will be

seen that the rate of mortality steadily decreases with the gain of experience. Thus Dillon Brown obtained 22 recoveries in his first 100 cases, 32 recoveries in his second hundred, and 33 in his third; Waxham obtained 26 recoveries in his first 100 cases, and 33 in his second; O'Dwyer himself reports 17 recoveries in his first 100 cases, 27 in his second, and in 77 cases of his third and latest report of cases there were 62 recoveries; or in all 33 per cent.

Of course, some operators have had discouraging results, and their opinion of the operation has suffered accordingly. Notably among these is Dr. Schwalbe, whose address to the Medical Society of Berlin, was anything but in support of the operation. The statistics of other continental operators, as gleaned by Dr. A. Rosenberg, reported to the Berlin Medical Society, and published in the *Berliner Klein Wochenschrift*, June 22, 1891, are too positive to be misconstrued, and would lead one to believe that repeated failures were due to lack of skill or unprecedently unfavorable complications, rather than the fault of the operation itself.

Thus Ranke's present percentage of recoveries is 32.7 per cent., Ganghofner 48.6 per cent., von Muralt 32.5 per cent., and von Wiederhofer actually 50 per cent.

These unadorned statistics need no comment, and sufficiently prove the triumph of the operation.

The value of any operation can only be proven by the comparison of most extended statistics, and even these are sure to be more or less faulty. It will be of interest to our readers to quote briefly the results of Ranke's researches on this subject, as reported by him to the Pædiatric Section of the meeting of Natural Scientists in Heidelberg, in 1889. He collected, as far as possible, the available histories of all intubations and tracheotomies in Germany, Austria and Switzerland, numbering 413 intubations and 866 tracheotomies. In primary diphtheria, tracheotomy yielded a result of 39.8 per cent. recoveries, and intubation 36.2 per cent. recoveries; in secondary diphtheria, tracheotomy gave 17.3 per cent, of recoveries and intubation 18.3 per cent.; or in all 38.1 per cent. recoveries for tracheotomy and 34 per cent. for intubation, and Ranke then expressed the opinion, that with the gain of skill in the performance of this operation, the statistics of the results of intubation would be materially bettered.

Indeed as it is, when performed during the first year of life intubation gives a rate of recovery of 20 per cent., against 6.8 per cent. for tracheotomy.

The utility of O'Dwyer's operation does not end with croup and diphtheria. The brief histories of the following cases will illustrate this. Thus Annaudale reports a case of suppurative inflammation of the thyroid cartilage which rendered breathing almost impossible. Intubation was performed and the patient's breathing at once became easy. Subsequently the abscess was opened under chloroform anæsthesia and a large quantity of pus evacuated. The result was a speedy recovery. The same author reports a case of malign tumor, which had grown fast to the larynx and trachea. During the operation for the removal of the growth the patient became asphyxiated. Tracheotomy offered unusual difficulties in the case, and therefore intubation was performed. Breathing at once became easy and the operation was successfully concluded. Again, a child of five years, took a drink from a kettle of boiling water, and soon—in consequence of the scald—had great difficulty in breathing and became dyspnœic. Intubation was performed and recovery resulted.

These and similar cases, many of which could be cited, clearly show the value of the method in emergencies. Macewen performed intubation successfully in a case of œdema of the larynx, in a child of five, allowing the tube to remain in place for five days without harm or inconvenience.

Regarding the further indications for intubation, we may justly consider the suddenly appearing respiratory difficulties not infrequently met with in syphilis. These may be caused either by condylomata, subglottis, laryngitis, gummata or perichon-

dritis. Leffert has reported a case of syphilitic laryngeal stenosis—caused by the presence condylomater in the larynx—in which the difficulty in breathing occurred so rapidly that suffocation seemed imminent. Intubation gave complete relief. The tube was allowed to remain *in situ* for three days, and upon its removal the tumors were found to have greatly decreased in size. No subsequent difficulty in breathing was experienced.

The histories of a number of similar cases, collected from the reports of various continental writers, lie before us, but lack of space forbids our repeating them. The operation has also been of signal service in pseudo-croup, avoiding the necessity of tracheotomy, as is shown by the history of a case reported by Dr. A. Rosenberg.

In chronic stenosis the operation offers still better results than in acute cases, and in such the procedure is absolutely without danger. Among the most frequent causes of chronic stenoses of the larynx, are syphilis, scleroma, diphtheria, tuberculosis, possibly leprosy, and also traumatisms. In short, in all cases where from any cause, either traumatic or pathological, there is a deformity or contraction of the larynx, rendering breathing difficult and asphyxia imminent or possible, intubation is indicated as the most rational procedure for obtaining relief. Naturally when performed for the relief of symptoms resulting from syphilis, a specific treatment for the latter disease must be simultaneously resorted to.

Rosenberg reports cases in which the mental impression induced by the treatment, resulted in recovery. This was especially noticeable in a severe case of hysterical aphonia, but in considering such cases we are apt to lose sight of its real value in more acute ailments, however, when as in the above, the case assumed so severe a type that the patient had been brought to a hospital for the purpose of having tracheotomy performed in order to gain relief from oncoming asphyxia, the advantages of the simpler treatment are obvious.

In closing this necessarily fragmentary review of the operation of intubation, we deem it unnecessary to draw any lengthy conclusions. It has been our endeavor to portray the present status of the operation with impartiality, and it is for our readers to form their own conclusions as to its merits, as well as its advantages or disadvantages compared with tracheotomy.

CORRESPONDENCE.

PRIORITY IN THE USE OF ARSENITE OF COPPER.

ED. MEDICAL AND SURGICAL REPORTER:

SIR:—Knowing the dangers which surround one who may lay claim to the discovery of any new remedy, I have refrained from making any such claim in regard to arsenite of copper or any other medicament. I was advised that it was a useful remedy in the treatment of "cramp colic," and with that as a basis, I have extended its use to allied disorders, and am still studying its wonderful properties, much to my satisfacfaction. I have serious doubts as to the policy of publishing my later experience—because no one would believe me. My present object is to call the attention of the readers of the REPORTER to an extract from a letter received from Dr. George A. Boyle, of Louisburg, Kansas, under date of August 28, 1889, which is calculated to shed some further light upon the priority of the use of arsenite of copper.

Dr. Boyle writes: "It may perhaps be interesting to you to know how I first learned of it (arsenite of copper) as a therapeutic agent in bowel affections. I have a friend, Dr. John Wherrell, living in Kansas City, Kansas (No. 13 Mather Street), who visited me a short time ago. He is House Physician and Surgeon to the Sister's of Charity Hospital of that city. There is an old physician, Dr. Fairchild I think, practicing in Kansas City. He is an old man, some eighty or eighty-five years of age, and a friend of Wherrell's. This old doctor never writes a prescription, but carries all his own remedies, and 'doses out' at the bedside. He is eminently successful, too.

Wherrell having had some very obstinate cases of cholera morbus and allied affections, one day asked the old doctor what *he* used in such cases. The old man replied, 'Arsenite of copper.' Wherrell had heard that the

old man *never failed* in these cases, and asked him how he used it. The old doctor replied that he took 'about so much,' indicating it by showing a small portion of the point of his pocket-knife blade; that he took about ten times as much sugar and ground and triturated them thoroughly together, and then gave 'about so much,' again indicating an infinitesimal amount on the point of his knife-blade, 'every ten or fifteen minutes until relief was obtained,' adding that it 'did the work *every time.*' Wherrell asked how he came to use it, and in reply, he said, 'Oh, I don't remember; I learned to use it in the South, thirty or forty years ago.' Wherrell had great confidence in the old doctor, but not confidence enough in himself to measure, or rather, guess the 'so much,' of so toxic a remedy, so he let the matter drop until he saw your article in the *Gazette,* a short time after his talk with the old doctor.

Wherrell, at once, upon reading your article, had his son, a drug clerk, triturate 1 grain with 100 grains of sugar of milk, and divided it into 100 powders as you directed. He has since used it in a number of hospital cases, and with *invariable* success.

Dr. Hidden, of Centralia, Kansas, is one of the ablest doctors in the State, and was a partner of Dr. Fairchild for some ten or fifteen years. Hidden says that Fairchild's veracity is *unquestionable.*"

Comment from me will be unnecessary.

Very truly yours,

JOHN AULDE, M. D.

Philadelphia, July 28, 1891.

BOOK REVIEWS.

TEXT-BOOK OF CHEMICAL PHYSIOLOGY AND PATHOLOGY, by W. D. Halliburton, M. D., B. Sc., M. R. C. P.; London, Longmans, Green & Co., 1891. Received through P. Blakiston, Son & Co.—pp. 875. Price, $9.75.

The best English or American book upon physiological and pathological chemistry for text-book purposes has been that of Charles. There has been a distinct need, however, for a work which, based upon a chemical foundation, should apply that subject more closely to the actual processes of physiological and pathological changes; in the fulfilment of this demand the present volume bids fair to find ample excuse for existence. It is true that the substance of the book is even more fully presented in certain German publications; but as a work for the physician who wishes to consult in relation to the processes he is meeting and for the average student of advanced medicine, Halliburton's work is very satisfying. The book is divided into six principal parts, dealing respectively with methods of research and analysis, the chemical constituents of the organism, the tissues and organs with their functions, alimentation, excretion and general metabolism. The first portion of the volume, treating of analysis and the technique of research in the directions covered by the volume, is perhaps more brief than would have been expected, although the chemical feature of the book is from the title to be looked upon as merely a means to an end; this meagreness is, however, fully made up in the text, where special technology is mentioned in connection with the subject in hand. The second portion takes up the subject of the various proximate principles, inorganic and organic of the organism, the proteids, the carbohydrates, albumenoids, etc.; it is interesting to note the clearness of the presentation of ptomaines and leucomaines, subjects which from the nature of things are very apt to be complicated. But brief mention has been made of the toxalbumenous compounds which arise from bacterial activities; it is probable that upon this question the rapidly growing interest and knowledge will in a short while leave much to be desired in the book. This cannot be accounted a fault, however; a work upon such an extended subject is bound to rapidly grow stale upon some one or more particulars. In the third portion of the volume, dealing with the study of the tissues and organs and their functions, the fullest purpose of the book is shown and its excellence rapidly grows upon one following the development of the text. While the effort is a chemical one, the author has skilfully made the chemical sections depend for their interest upon immediate reference to the other physical and clinical phenomena of the subjects, such as more practically bear upon the attention of the student. This character of the work obtains through the rest of the volume; although in the latter portion, as in the chapter upon excretion the author loses much of his grasp as a physiologist, attending more particularly to the chemical phases of his subject. The book cannot be criticized as an original production; no works of this nature can, as they are necessarily really compends of knowledge, the result of the labor of hundreds of investigators. This knowledge has been culled from a great mass of matter and has been fully criticized heretofore and its truth or credibility granted. The book-

maker cannot as such, alter a single portion of his matter, nor can he in conscience escape from the truths which it implies; that only for which he is responsible is the completeness and manner of presentation. Herein the work of Halliburton is commendable; it cannot be said that to bring into prominence his own views he has warped or overlooked those of others. Taken as an entirety the work is decidedly clear and full. There are here and there, of course, minor errors of omission and too of commission but they do not mar the real effort as they are invariably in connection with side lights. In the discussions which properly belong to the book and upon which its existence rests, the book is concise and correct. It might have been expected in a work which has treated so fully of the blood in all its chemical, physical and clinical aspects, that some mention at least of the physico-chemical peculiarities of the leucocytes in leukæmia and allied diseases should have been made; none, however, appears. So, too, in the section upon general metabolism the subjects of heat production, heat regulation, the production and preservation of energy, and others would probably merit fuller and closer attention. As already stated, however, in general the material is clean and complete, and for the class for whom it has been written the book must certainly fill a demand.

PERISCOPE.

THERAPEUTICS.

ULYPTOL.

Ulyptol is the name given to a preparation brought forward by Dr. Schmeltz, of Nice. It has the following composition:

℞

Salicylic acid	6 parts.
Carbolic acid	1 part.
Essence of eucalyptus	1 part.

The mixture possesses an aromatic odor and a burning taste. It is almost insoluble in water, but easily soluble in alcohol, chloroform, ether, alcohol and glycerine, and also in alkaline and ammoniacal solutions. It is, according to Dr. Schmeltz, a most excellent antiseptic, and especially useful in the dressing of wounds.—*Journal de Méd. de Paris.*

PYOKTANIN IN THE TREATMENT OF CANCROIDS.

Dr. von Sehlen, in a recent number of the *Monatshefte für Prakt. Dermatologie*, reports a remarkable case of cancroid which was rapidly and completely cured by the application of pyoktanin in powder form.

The case was that of a man, seventy years old, with a cancroid of the cheek of about the size of a quarter of a dollar. The disease had been treated for a long time with resorcin without any favorable result; then the analine dyes, as recommended by von Mosetig were tried.

The powdered pyoktanin was directly applied in substance and the surface protected with a plaster. The treatment at the outset proved almost unbearably painful, but the pain was somewhat alleviated by applications of solutions of cocaine and antipyrin and dusting iodoform and boracic acid on the cancroid. After five days' treatment a marked lessening of the discharge, and a general improvement in the appearance of the ulcer had taken place. The application was at first renewed twice, and later only once a week. The edges of the cancroid began to dry up and soon nothing but a slight scar remained.

THE TREATMENT OF ACUTE ANGINA.

In the *Journal de Médecine* for April 10, 1891, Dr. Capart publishes the following methods of treatment which he employs in different forms of angina. In acute suppurative tonsillitis he causes the patient to suck small pieces of ice and orders 20 grains each of powdered salol and milk-sugar to be divided into six powders, three to be taken each day; or an equivalent amount of salol may be made into an emulsion with gumarabic and given according to the same directions. In addition, he prescribes a gargle composed of 15 grains of salicylic acid, 7½ grains of acetate of sodium in 9 ounces of distilled water, flavored with a little syrup. As a prophylactic measure against the return of abscess in the tonsils, he advises the patients for at least a month to use a gargle of a weak solution of alum containing a few drops of carbolic acid, or the following gargle may be employed:

℞

Crystallized carbolic acid	1 drachm.
Absolute alcohol	5 drachms.
Essence of mint	16 minims.

Of this solution 10 drops are added to half a tumblerful of water, and used as a gargle morning and evening. In simple catarrhal angina he prescribes the following potion:

℞

Borax	60 grains.
Salicylate of sodium	30 grains.
Decoction of marsh-mallow	6 ounces.

Flavor with syrup. If a cure does not take place within 24 or 36 hours he then has recourse to a slightly astringent gargle, such as the following:

℞

Calcined alum	40 grains.
Alcohol and pure glycerin, aa	2½ drachms.
Water	10 ounces.

To be used as a gargle four times daily. He cautions in the strongest terms, against the use of concentrated solutions of tannin or alum.—*Ther. Gaz.*

ON THE THERAPEUTIC USES OF MEDICATED SUPERFATTY SOAPS.

Dr. Carblom, of Riga, reports a series of therapeutical experiments with the different sorts of Eichhoff-Unna's medicated "superfatty" soaps (cf. Drs. W. Allan Jamieson's and B. Dott's paper in the *British Journal of Dermatology*, June, 1890, p. 172; also Dr. B. H. Paul's, *ibid.*, March, p. 81), applying them in one of the following four ways:—1. A warm lather was rubbed into the skin, and after a short time washed away; 2. The lather was rubbed into the skin in a similar manner, but removed by means of wiping with a dry towel or linen; 3. The parts were covered with a thick layer of the lather and allowed to dry; 4. The lather was similarly thickly painted over the area, and then covered with some waterproof, and thus Dr. Carblom has come to the conclusion that a superfatty:

1. *Resorcin-and-salicylic-acid soap* proves especially useful in parasitic cutaneous affections, associated with hyperplasia of the cuticle—such as parasitic or seborrhoic eczemas, psoriasis, acne, ichthyosis.

2. A *salicylic-acid–resorcin–and–sulphur soap* is indicated in similar affections, but more especially in such cases as are characterized by a more chronic course of the cutaneous inflammation, deeper hypertrophy, and desquamation.

3. A *salicylic-acid-resorcin-sulphur-and-tar soap* is serviceable in the same category of affections, but particularly in common psoriasis.

4. All the three afore-mentioned soaps can be also strongly recommended in favus and tinea tonsuran.

5. A *quinine soap* gives good results in pityriasis versicolor, and in the intertrigo eczemas of children. An after application of some bland powder is advisable.

6. A 3 per cent. *hydroxylamin soap* proves beneficial in lupus, tinea tonsurans, inveterate cases of psoriasis and eczema, and, occasionally, even in lepra and lues. The application usually causes some burning pain.

7. A 5 per cent. *iodoform soap* affords a good means for cleansing and stimulating indolent ulcers.

8. A *creolin soap* can be employed with advantage in scabies, impetigo contagiosa, intertrigo, as well as in bromidrosis. The lather should be firmly rubbed into the affected parts several times a day.

9. An *ergotin soap* is of service in simple rosacea, frost-bites, and for treating congested cicatrical areas of any kind.

10. An *iodine soap* can be successfully used (*a.*) as a resorbent in cases of goitre, or superficial granular enlargements; and (b.) as a parasiticide in cases of tinea tonsurans, pityriasis versicolor, psoriasis, etc. It should be kept in mind, however, that the preparation possesses a powerful irritant action, and hence its application should be from time to time interrupted, and a zinc starch powder employed instead.

11. A *salicylate-and-creasote soap* produces excellent results in lupus. It may be used either as a wash to the part, or in the form of lather (protected with a waterproof dressing), or the soap application may be alternated with some surgical procedure.

In comparison with plasters, salves, pastes, etc., the use of the soaps is said to be both more convenient and a good deal cheaper. On the whole, the introduction of the preparations can be safely termed an important advance in dermato-therapeutics.—*Brit. Jour. Derm.*

ON THE CONTAGIOUSNESS AND TREATMENT OF COMMON WARTS.

Dr. J. F. Payne, in the *Brit. Jour. Derm.*, says: Common warts, including under this name the so-called Verruca vulgaris, and Vurruca plana (which differ only according to the part of the skin on which they occur), but excluding the senile pigmented warts and the pointed condylomata, of which the origin is not so clear, appear to arise by implantation of some contagious material at one or more points of the skin, usually on exposed parts. This implantation may of course be favored by want of cleanliness, but warts are certainly not produced, as is sometimes asserted, by this cause alone. There is also some idiosyncrasy which may cause either special predisposition or immunity; for while some persons, especially children, are very liable to warts, others, though liv-

ing under precisely the same conditions, never suffer from them. From the original wart or warts thus produced others may be set up by local inoculation just in the immediate neighborhood, afterwards perhaps in more distant parts, such, for instance, as the other hand, or the face; but often the affection has a strict local limitation; the process of extension is arrested, and the warts die off and disappear spontaneously without any apparent cause.

At any period, he believes, that communication to another person is possible by ordinary contact, or possibly by handling the same objects; though this does not occur constantly, nor perhaps very often, since a somewhat close contact appears, as in the case of scabies, to be necessary. The familiar fact that warts occur in many children or young persons in the same family, school, or place of business, seems difficult of explanation on any other hypothesis. The same hypothesis, taken in connection with the fact of their frequent spontaneous disappearance, explains also some of the curious popular superstitions on this subject: such as that warts can be conjured away by charms, or got rid of by sale to a willing purchaser. The belief in charms is of course supported by the occasional spontaneous vanishing of warts after some ceremonies have been gone through, and the supposed transference by sale from one person to another will rest upon the not impossible coincidence that they may be fading away from the seller at the time that the contagion has already been transferred to the buyer. Such coincidences impress the imagination, while the far more numerous negative instances or failures are forgotten.

There is even less difficulty in accepting the belief that fresh warts are produced by local inoculation of some pathogenic material derived from an existing one. If the spread of these structures in any patient be carefully watched, it will be seen to be governed by some such law. The causal or genetic connection is sometimes marked by the different appearance of warts on different regions. For instance, from the back of the hands they may be, in children, transferred to the face; though, being in the latter situation, smaller, less conspicuous, and less horny than on the hands, they are often thought to be of a different kind. Of course it is quite possible also for the first inoculation to occur on the face.

We do not as yet know of what the infective material consists. Micrococci may doubtless often be found, but they are so commonly present in inflamed or hypertrophic patches of skin, that they can hardly, without further proof, be admitted as a cause. The popular belief is that inoculation takes place through the blood, if the warts are made to bleed, and there seems to be some ground for supposing that blood may be a specially good carrier of infection.

With regard to the local treatment of warts, there is little new to be said. Collodion of salicylic acid, which is now become quite a popular remedy, seems generally the best application, but it does not always succeed. Various caustics and acids are also used. The commonest mistake is that to attempt to destroy the wart once for all by some powerful caustic. This process is often painful, and if it succeeds is apt to leave a scar. A better method is to apply some light caustic, such as acetic acid, either concentrated or diluted to half strength, several times a day; and in this lies, Dr. Payne believes, the main secret of successful treatment. Of internal treatment by sulphate or carbonate of magnesia, recommended by several authors, and lately by Radcliffe Crocker, Dr. Payne has no personal experience.

THE THERAPEUTICS AND PHYSIOLOGY OF BLEEDING.

According to Dr. Pye-Smith venesection is indicated in: 1. Cyanosis with distension of the right side of the heart, whether from pulmonary or other obstruction to the circulation. 2. Intense pain of aortic aneurism. 3. Uræmic and prolonged epileptic convulsions. It is contra-indicated in fevers, inflammatory disorders, acute pneumonia, hæmorrhage and apoplexy.

The physiology of venesection has recently been studied again by Professor I. M. Dogiel (*Vratch*, in *London Medical Recorder*). His experiments were conducted mainly upon dogs and he comes to the following conclusion: 1. Dogs can survive, without any permanent injury to their health, after having lost from one-seventh to one-half of the animal's total mass of blood at a time. The extraction of two-thirds of the total, however, is invariably followed by death. 2. Bloodletting manifests a sharply pronounced influence on the frequency of the cardiac beats in the case of a moderately large depletion (from one-seventh to one-third of the total quantity of blood), the cardiac action becomes accelerated, while after larger losses it either quickens or becomes slower. 3. Bloodletting also produces a marked effect on the rhythm and energy of the cardiac contrac-

tions (as details). 4. Mild bleedings (made by means of ten or fifteen leeches) either do not alter the arterial tension, or slightly raise it. More or less considerable arterial bleedings either do not affect the blood-pressure, or are followed by a fleeting initial fall with a subsequent rise, while venesections commonly lower the tension. 5. After moderate depletions "the pulse-wave acquires a periodical character." 6. In the beginning of a bleeding the bodily temperature slightly rises, then sinks about 20° F., and afterward again gradually rises. 7. On repeated depletions (made every three or four weeks) the bodily weight at first increases—and that sometimes "very considerably"—but later on begins to sink. 8. The same holds true with regard to numerical strength of red blood-corpuscles. 9. On the post-mortem examination of animals dying from bleedings the most prominent feature proves to be a fatty degeneration of the heart and other striated muscles, as well as various viscera. In the course of a discussion, Professor A. B. Vogt and Dr. S. M. Shtcherbakoff have stated that, according to their experiments, bleedings do increase not only the number of red blood-corpuscles, but also the proportion of hæmoglobin.—*Med. Rec.*

THE EFFECTS OF STRYCHNINE ON THE STOMACH.

The effect of nitrate of strychnine on the functional activity of the stomach has been investigated by Dr. Gamper. He found that strychnine increased the amount of gastric juice secreted, the general acidity, and the quantity of free acid in the secretion. It also restored the absorption from the stomach, and strengthened the mechanical movements. Its effect continued for some time after its administration had been stopped. Dr. Gamper declares strychnine to be the most effective of all drugs in the treatment of chronic alcoholism.—*Lancet.*

THE VALUE OF ARISTOL.

In the *Centralblatt für die Gesammte Therapie* for May, 1891, Dr. Weissblum reports the results of some experiments which he made with aristol in the treatment of eczema, psoriasis, and favus. As a vehicle, he employed either olive oil, vaseline, or lanolin. With vaseline, he employed the aristol in ten per cent. strength; in a few cases in twenty per cent. The author's experience seems to show that in severe cases of psoriasis nothing whatever can be expected of aristol, and, after four to ten months' treatment with aristol, other remedies must be finally resorted to. In light cases treatment will be necessary for from two to five weeks, although even then the effects are by no means as satisfactory as obtained with pyrogallol. In one case, on the fourth day of treatment with aristol, slight symptoms of irritation appeared, consisting of redness and swelling. Three cases of psoriasis were treated with aristol in ten per cent. strength and with hydroxylamine. Hydroxylamine had to be given up in the second week on account of the irritation and pain which its employment occasioned, and although the aristol was persisted in from five to eight and eleven weeks, not the slightest influence was obtained from its administration. Pyrogallic acid had to be employed in all cases. The author concludes as regards psoriasis that where a speedy cure is a matter of indifference aristol may be used. Eight cases of eczema were treated with aristol, in all of which the aristol appeared to be satisfactory, while three cases of favus and one of alopecia areata were treated with aristol with no more effect than could be expected from the vehicle in which it was administered. So also a case of syphilitic gummatous ulcer was treated for three weeks with powdered aristol without the slighest influence whatever.—*Ther. Gaz.*

MEDICINE.

ALBUMINURIA IN PERSONS APPARENTLY HEALTHY, AND A CONSIDERATION OF ITS RELATION TO LIFE ASSURANCE.

Dr. William B. Davis, in an article in the *N. Y. Med. Record*, says that he thinks we will be warranted in accepting the following rules for guidance in the consideration of candidates for life assurance having albuminuria, viz.:

General Rules.—1. There should be nothing in the family history indicative of heredity of Bright's disease, and there should be no symptom of renal disease in the personal history except albuminuria.

2. The candidate should be under forty years of age, in good health, and there should be no history of gout, rheumatism, syphilis, lead poisoning, nephritis, intemperance, chronic dyspepsia, or dropsy.

3. There should be no indication of hypertrophy of heart or increased arterial tension,

no accentuation of the aortic second sound, and no palpitation or dyspnœa.

4. There should be no retinal changes.

5. The color, density, and quantity of the twenty-four hours' urine should be normal, or it may be darker in color and heavier in density.

6. The specific gravity of the twenty-four hours' urine should not be below 1-030. It may range from 1.015 to 1.030.

7. The precipitated albumin should not exceed one-eighth of the urine.

8. There should be a period of the twenty-four hours when the urine is free from albumin.

9. The urine, as a rule, should contain no tube-casts. When, however, the specific gravity and quantity of urine are normal, the presence of a few hyaline casts have no serious import.

When the above conditions have been met, and we are convinced of the ability of the medical examiner, and are satisfied with the completeness and carefulness with which the investigation of the case has been made, I think we can safely approve the candidate for a short endowment policy.

To a person who has just passed the above gauntlet and been subjected to a rigid medical examination, this action will doubtless appear illiberal, but until the clinical significance of albuminuria in persons apparently healthy has been finally determined by observations upon one full generation, we cannot, and probably ought not, to expect life assurance companies to do any better for them.

ORIGIN AND ROLE OF PUS CELLS.

Professor Ranvier made an interesting communication at a recent meeting of the Academy of Sciences on the origin and signification of pus cells. He said that for some years past histologists generally were agreed that the cells of pus were none other than the white corpuscles of the blood, which had emigrated from the vessels at the time suppuration was set up. He found it difficult, however, to believe that the blood could yield in this way, and in a time comparatively short, the enormous quantity of pus found in many pathological conditions, such, for example, as the purulent infection of wounds, accidental and operative. That the white cells do emigrate in the manner generally accepted he had no doubt. This takes place under normal physiological conditions, while it is still more pronounced in certain pathological states not ending in actual inflammation, in the process of which it is of course abundantly evident. What his experiments led him to establish, however, was that pus cells had also quite another origin—viz., the transformation into lymph cells of clasmatocytes, elements derived from migratory cells, which under the influence of irritation revert to an embryonic condition and proliferate rapidly. As to the *role* of the pus cells, M. Metchnikoff has shown the importance of lymphatic cells in the combat of the organism against microbes. In simple inflammation determined by caustics, or other irritant agents, their *role* is not less important. They eliminate the dead elements, and thus prepare the way for the processes of regeneration.—*Brit. Med. Jour.*

PHENACETIN IN INFLUENZA.

I desire to draw the attention of the profession to the beneficial action of phenacetin during the first stage of influenza. Its action is prompt and striking, so that many patients declare they have derived more benefit from the "powders" than from anything else. It rapidly cures the headache which is such a distressing symptom at first, helps to reduce the temperature, and mitigates, but does not entirely remove, the aching of the limbs, a few doses of salicylate of sodium effecting its final removal. I give the phenacetin in 5-grain powders, repeated every four hours, until the headache and other pains cease. I have used phenacetin largely in a variety of conditions, and consider it is unrivalled as an analgesic. It seldom fails, it is comparatively cheap, tasteless, and, as far as I can see from a tolerably extended experience of it, is totally free from the unpleasant after-effects—depression of heart, etc.—sometimes caused by antipyrin and other drugs of its class. Insolubility is its sole drawback.—John P. Henry.—*Brit. Med. Jour.*

THE VALUE OF THE TONGUE AS A RESPIRATOR.

J. M. Elborough writes as follows:

It is not generally known that nature has provided each of us with the best respirator always at hand in the tongue. For years I have personally relied on this alone, and have recommended this proceeding to many patients. When facing a cold east wind, or breathing quickly the night air, I never quite close my mouth, but purposely keep the lips a trifle parted, and at the same time curl up my tongue towards the roof of my mouth until the tip reaches as far back as

the soft palate, and I gently press the arched under surface of the tongue in some degree against the hard palate (a little practice soon makes this easy to do). The cold air then, as it enters the mouth, strikes against the under surface of the tongue, as well as the floor and sides of the mouth, and is made to pass in a somewhat circuitous manner between the sides of the tongue and the buccal mucus membrane of the pharynx, being thereby warmed in its course, so that by the time it reaches the larynx it is nicely rid of chill, and does not excite cough and catarrh. At the same time a certain quantity of air, of course, finds its way through the nasal passages to the chest, and it is obvious that a larger quantity of cold air can be effectually warmed by this method of procedure than by relying on either the nose or mouth alone. That the large blood-supply of the tongue renders this organ an excellent air warmer must be obvious to all.—*Lancet.*

ESSENTIAL SPASM OF THE CARDIAC ORIFICE OF THE STOMACH.

Dr. Stefano Mircoli, in speaking (*Lo Sperimentale*, April 15th, 1891) of spasm of the cardiac orifice of the stomach, points out that the symptom is due not to stimulation, but to the want of it, since if the vagus is divided the opening remains closed, unless the peripheral end of the cut nerve is artificially stimulated. Schiff has shown that there is a special twig from the vagus which regulates the opening of the cardia. The cardia is richer in ganglia than the stomach itself, there being twelve in the former and only ten in the latter; this richness in nervous material almost entitles it to be called the "brain" of the stomach. The different parts of the cardiac orifice are functionally independent of each other, and one-half may be in a state of contraction while the other is relaxed. Mircoli relates three cases with the object of showing that in some persons, otherwise perfectly healthy, the susceptibility of the cardia to nervous impressions may be so marked as to amount to disease, and may be inherited as a diathesis. The first case was that of a man, aged 50, who in May, 1885, suffered from melæna (suggested to have been due to "abdominal vasomotor paresis"); the bleeding recurred several times, and the patient died of exhaustion in the following September. Among other symptoms, intermittent spasm of the cardiac orifice was observed; when the patient was most weakened by loss of blood, solid food did not reach the stomach, and even liquids partially failed to enter it. On passing a bougie, the œsophagus was found to be unobstructed, but firm resistance was encountered at the cardiac orifice; this sometimes yielded, but at other times could not be overcome. The constriction always vanished spontaneously in a few days. A son of this patient, aged 24, went to bed one night in 1888 after a hearty supper; in the morning he could not swallow, everything taken, whether solid or liquid, being stopped at a point corresponding to the cardia, and then thrown up. The spasm began to yield after some hours, to energetic counter-irritation over the epigastrium and inunction with "oil of hyoscyamus," and finally disappeared on the following day. A brother of this patient, aged 27, suffered from similar symptoms in 1890, under the mental stress caused by an impending lawsuit; the condition persisted more or less for more than a month, and finally ceased when he had won his case. Mircoli thinks that in persons of neurotic temperament such a condition might, by frequent repetition, lead to true stenosis of the cardiac orifice, and he quotes a private letter received by him in 1885, from the late Professor Loreta, in which that distinguished surgeon says: "Of the nine divulsions which I have performed for stenosis of the cardiac orifice, three were caused by contraction with subsequent fibrous degeneration. In the history of these patients (all of whom were women) hysteria was a prominent element; this was accompanied by dyspeptic phenomena, at first intermittent, but after some years becoming continuous and so preponderant as to induce agonies of hunger and thirst. There was no cause or circumstances which could lead one to conjecture sclerosis or cicatricial contraction. This is a chapter of pathology which requires to be illustrated and extended, so that medical practitioners may be forewarned against catarrhs, gastritis, cancer, etc.—diseases which sometimes are merely secondary to purely mechanical conditions."—*Brit. Med. Jour.*

NICOTINE PSYCHOSIS.

According to Dr. Schroff, *Wiener Med. Prusse*, the primary effect of tobacco upon the system, is excitation, the secondary, depression. It affects the entire muscular system, the heart as well as the vasomotor system. The disease called nicotinosis mentalis is a primary insanity, having a regular course and characteristic symptoms. Among

the latter are: a feeling of extreme debility and impotence, with early hallucinations, delusions and suicidal tendencies. The patient at first feels ill, is restless, easily excited, sleepless, indifferent to usual occupations and more or less depressed; afterwards hallucinations of sight, hearing and of general sensation set in with much palpitation and pain about the heart. Later in the course of the disease the hallucinations become more exaggerated; he has visions of angels, heaven and hell, is excitable and boisterous. The paroxysms of excitement are periodical, lasting two weeks or more, with intervals of quiet. In the beginning of the disease the patient is gloomy and restless; later on, and as it becomes chronic, he is more quiet and feeble-minded. Patients sometimes recover in the early stages, but never in the later ones. Dr. Kjellberg, of Upsala, has investigated the effects of tobacco in inveterate smokers and finds that they are of a distinctly injurious character. Nicotinosis mentalis is a primary disease which belongs to the group of mental intoxications. Dr. Kjellberg also speaks of a preliminary stage lasting about three months, which is characterized by general malaise, uneasiness, insomnia, depression often of a religious tendency. He divides the established disease into three stages: (1.) The patient is subject to hallucinations, fixed ideas, with tendency to suicide, depression, attacks of fear and outbursts of anger. He talks little but logically; the nutrition is impaired. (2.) Exaltation of a pleasant type is present, followed after two or three weeks by depression which, in its turn, is succeeded by a slight maniacal condition. (3.) The intervals between the attacks are shorter, the patient very restless and the intellect and memory impaired. He observes what is going on, but is taciturn and indifferent. The prognosis is good before the third stage, but after that unfavorable. The treatment consists mainly in abstinence from the use of tobacco, with nutritious diet.

SURGERY.

THE POINT OF SELECTION IN PARACENTESIS OF THE ABDOMEN.

Paracentesis of the abdomen is one of the most common, as it is one of the most ancient, of surgical procedures. The technique of its performance is based upon well established principles, known to every practitioner, but there is still some difference of opinion as to the place best adapted for the puncture. Some surgical authorities recommend the median line as most suitable for paracentesis, while others express a preference for Monro's point of selection, which is a point situated in the center of a line drawn from the umbilicus to the anterior superior spinous process of the ilium. Aside from the possibility of wounding the intestines or bladder, the chief danger in this operation is injury to the epigastric artery, and it has been claimed that this accident may be prevented by making the puncture at the spot selected by Monro. That this claim is not well founded is evident by a case recently reported by Dr. Frzebicky in the *Archiv für Klinische Chirurgie*, where a paracentesis performed at the latter place for an inoperable ovarian cyst was attended by so profuse a hæmorrhage from the epigastric artery, that it proved well-nigh fatal. This accident led the doctor to investigate the subject, and as the result of numerous experiments on the cadaver, he arrived at some conclusions which are of practical interest, both to the surgeon and physician. The investigations, which were carried out with unusual care, demonstrate the fact that, on anatomical grounds, the liena alba is the most suitable place for paracentesis, provided, of course, that no contra-indication, such as adherent intestines, exists. By performing the operation in the median line, all danger of wounding important parts is avoided, although the puncture should not be made too close to the symphysis pubis to prevent injury of the bladder. It is also necessary to keep exactly in the middle since, in rare instances, a large branch of the epigastric artery passes along the side of the linea alba, injury of which may prove fatal. Although in the majority of cases, where the puncture is made at Monro's point of selection, the artery or its branches are not exposed to injury, there is a considerable minority where this accident is liable to arise. If, for some reason or other, paracentesis cannot be practiced in the median line, the author recommends us to select the outer half of a line drawn from the umbilicus to the anterior superior spinous process of the ilium.

If the artery is injured by the trocar, it may be compressed by packing the wound with iodoform gauze, but if the bleeding is at all profuse, no time should be lost in ligating the vessel. Hence the author judiciously suggests that, in cases where the puncture is made outside the linea alba, the surgeon should always be provided with the instruments necessary for ligation. In the absence

of instruments and assistance, compression of the iliac artery may be tried, although it is frequently difficult to accomplish this procedure in a satisfactory manner.—*Internat. Jour. Surg.*

DISTURBANCES IN METABOLISM FOLLOWING LONG-CONTINUED CHLOROFORM NARCOSIS.

Chronic chloroform poisoning has been noted by Casper, Langenbeck, and Behrend, but their cases have attracted but little attention. Nothnagel, in 1866, experimented upon dogs, and after death was able to demonstrate fatty degeneration of the heart and liver.

Professor A. Kast and Dr. B. Mester refer to these early cases and to Nothnagel's experiments, and also to the much more recent experiments of Ungar, Strassmann, and others. One of them had previously investigated the influence of chloroform narcosis upon the excretion of chlorides in the urine. The chlorides were found to be increased, the animals exhibited a series of disease symptoms, and failed in nutrition and weight, in spite of the fact that both before and after narcosis they were kept upon meat food freed from chlorine. The inference is that chloroform effects a toxic disturbance of nutrition.

Kast and Mester, struck by the analogy of the excretion of the chlorides as an after-effect of chloroform-narcosis to the chlorine tissue-change in other severe disturbances of metabolism, turned their attention to the excretion of the sulphurous substances in the urine. They examined the urine of fifty or sixty women shortly after chloroform narcosis in the Freiburg gynæcological clinic, and that of ten other patients from the surgical clinic. The urine was examined qualitatively and quantitatively for sulphur compounds. About thirty control tests were made. Unoxidized sulphur was found to be increased largely. This is regarded as showing the profound effect of prolonged chloroform from narcosis on the metabolism of albumin. As to the duration of this metabolic change, the urine showed the lead reaction for sulphur in one case as early as an hour after the chloroform narcosis, which had lasted two hours; usually it is detected on the second day, and in one case it was present on the fifth day. The duration of the increased excretion of sulphur-holding substances coincides pretty accurately with the duration of the well-known reducing properties of chloroform urine.

As to the nature of the sulphur compound, Kast and Mester believe it to be cystin, or a body resembling it.

Urine, under the influence of chloroform narcosis, becomes highly acid, due apparently to the considerable quantities of chlorine, which occurs in the form of hydrochloric acid.

The conclusions of Kast and Mester are as follows:

1. Chronic chloroform poisoning, that is to say, the toxic action of large doses of chloroform, given either internally or by prolonged inhalation, is recognizable both in animals and in men.

2. It manifests itself by a fatty degeneration of the organs. There is a lessening of the body weight, an increased excretion of chlorine (Kast), and of oxygen (Strassmann), showing an increased consumption of albumin in animals. In man, as the result of prolonged chloroform narcosis, a sulphur compound, resembling cystin, is thrown off in considerable quantity. There is also a constant and more or less considerable urobilinuria.

3. In relation with the form of excretion of the received chloroform stand—(1) the reducing property of the urine through the formation of a glycuronic acid combination, and (2) the considerable increase in the acidity of the urine following chloroform narcosis.—*Zeitschrift für klin. Medicin*, Bd. lxxx., Hefte 5, 6.—*News.*

TREPHINING THE SPINE FOR FRACTURE OF THE DORSAL VERTEBRÆ.

Cases of trephining the spine are always calculated to interest surgeons, and any successful case of the kind is well deserving of being placed on record. Dr. D. N. Knox, of Glasgow, gives the notes in the current number of the *Glasgow Medical Journal* of a case of trephining the spine for fracture with dislocation of dorsal vertebræ. The patient was a pit boy, aged 13, who received a severe injury to his back through a cage having fallen upon him. On examination, much bruising of his back was found, and a very distinct projection in the dorsal region of the spine caused by a displacement backwards of the eleventh dorsal vertebræ. Urine was passed involuntarily soon after admission. There was complete loss of power and sensation in both lower limbs. The spine was trephined by the author thirty-six hours after the injury. The projecting spinous process was cut down upon, the muscles carefully separated from it, and from the spine

and laminæ of the vertebræ above. The tip of the tenth spinous process was found to be broken off, and the body of the eleventh vertebræ was broken across in a direction obliquely downwards and forwards; the upper articular processes were also fractured and displaced behind the lower articular processes of the vertebræ above. The lower vertebræ was displaced backwards fully three-fourths of an inch, and its spine was rotated as much to the right side. The laminæ of the tenth dorsal vertebræ were sawn through with Macewen's saw, and the spinal theca exposed. The latter was not opened. Small portions of the articular processes were also nipped off, and the spine being carefully extended, the displaced vertebræ was pushed back into position. The spinal canal was carefully cleaned, and as the soft tissues were so much injured, the wound was stuffed with gauze. On opening the canal pulsation was not at first felt in the cord, but by the end of the operation it could be distinctly felt. On the day following the operation, sensation was found to be perfect in both limbs, but it was the third day after the operation before the boy could move his toes. This was the sole movement of which he was capable for nearly two months. The wound was allowed to granulate on account of the severe bruising of the soft parts. The progress of the patient was steady but slow. He was first able to turn on his side by swinging round on his pelvis, then to sit up, then to raise himself on his hands and knees in bed, then he crawled on the floor, then raising himself and supporting the upper part of his body on a stool or on the bed, he rested his weight on his feet, then he began to walk with assistance, and, lastly, he learned to balance himself on his feet. The author concludes by saying that he expects before long that this training of the muscles by the boy will be perfect, and that he will have normal control over his movements.—*Med. Press.*

RESECTION OF THE PUBIS IN SUPRAPUBIC CYSTOTOMY FOR THE REMOVAL OF VESICAL TUMOR.

At the French Congress of Surgery, M. Heydenreich, of Nancy, in a paper of which an abstract is given in the May number of the *Revue de Chirurgie*, stated that occasionally on removal of a tumor from the bladder by the suprapubic method, some difficulty is experienced in reaching the seat of disease in consequence of the obstacle formed by the upper portion of the pubic symphysis. In order to overcome this difficulty the surgeon might, it is held, without compromising the solidity of the pelvic girdle, resect this portion of bone by two incisions made one on each side, beginning either within or without the spine of the pubes and carried downwards and inwards. The author practised this method in a case in which the vesical growth, notwithstanding the use of Peterson's bag, was inaccessible. The upper portion of the symphysis having been resected the operation was completed without any further difficulty. It is held that resection of the pubes does not add to the severity of suprapubic cystotomy, but that, on the contrary, it facilitates the operation and shortens its duration, and, at the same time, enables the surgeon to get beyond the limits of the tumor. Resection of the pubes, however, is not indicated in every case of removal of vesical growth. It must be regarded as an exceptional procedure, but still one which the surgeon should not hesitate to employ whenever it seems to be necessary. In the discussion on this paper it was asserted by M. Pozzi that the position of the patient advocated by Trendelenburg affords free access to almost every part of the interior of the bladder, and so in almost every case would render resection of the pubes an unnecessary and useless proceeding.—*Ont. Med. Jour.*

OPERATIVE MEASURES FOR THE RELIEF OF IMPAIRED HEARING.

In some cases of adhesions resulting from chronic suppuration of the middle ear Dench (*Arch. of Otology*, January, 1891) found good results follow operative proceedings. In one, after the reduction of inflammatory swelling on the inner wall of the tympanum he observed the stapes apparently firmly fixed by fibrous tissue. He made incisions through this material on two occasions with improvement of the hearing. In another case the upper edge of a large perforation appeared to press upon the ossicular chain. A vertical incision was made through this edge extending upwards about $\frac{1}{16}$ inch. The improvement which resulted has continued. In a third case the handle of the malleus had become adherent to the promontory, thereby fixing the ossicles. The adhesion was divided, and the hearing power was considerably increased. The tip of the malleus was, in a fourth case, drawn backwards, upwards, and inwards, and attached to the head of the

stapes by a firm band, the section of which rendered the hearing of articulate speech practically normal.—*Brit. Med. Jour.*

GYNÆCOLOGY.

INVERSION OF THE UTERUS.

Remy (*Archives de Tocologie et de Gynæcologie*, Feb., 1891) reports two cases of inversion of the uterus, each of special interest and each of important bearing on the causation of this accident. The first was that of a primipara who was delivered by a midwife. The method of removing the placenta by traction upon the cord in the axis of the inlet with one hand and compression of the fundus with the other was employed. Palpation, in order to determine the retraction of the uterus, failed to reveal the organ in its proper position in the pelvis. Suspecting hæmorrhage, she made an internal examination and discovered, within the vulva, a tumor which completely filled the vagina. The writer, on his arrival, found an inversion of the second degree. After an unsuccessful attempt at reduction by grasping the tumor in one hand and making compression with his fingers at the level of the pedicle, while he made counterpressure from without, he effected a reposition by pushing against the body of the uterus with the convex, dorsal surface of the fingers, slightly flexed, of one hand, at the same time making counterpressure with the other. When he had replaced the uterus he allowed his fingers to remain in the cavity, in order to excite contraction, and after giving an antiseptic irrigation he delivered the case over to the former attendant.

Inasmuch as there had been no adherence of the placenta and no violent traction, he concludes that the accident must have been due to some special cause. To explain this, he alludes to the important factor in uterine retraction, namely, the contraction of the uterine surface at the site of the placenta coincident with that of the rest of the uterus, in order to fill the void created by the detachment of the after-birth, and shows how, in this case, the absence of this factor played an important part in the inversion. The placental site, in this case, failing to contract, became inverted by the effect of the removal of the placenta, which acted like the piston of a pump, or, in other words, the abdominal pressure forced the lax uterine wall into the retroplacental space; the consertive influence, in such a condition, exerted by the resistance of the clots which accumulate behind the placenta, proving ineffectual.

The second case is that of a young woman, who, after her second confinement, which was normal in every respect, upon leaving her bed, suffered from a severe hæmorrhage which was repeated after a few days without apparent cause. In both instances hypodermic injections of ergotine were used successfully to control the hæmorrhage. The writer, upon examination some days later, discovered a friable tumor occupying the vagina just within the introitus. Owing to the consistence of the mass and the offensive odor of the discharge, he concluded that he had to do with a retained portion of the placenta. The attempt to remove the mass with a volsella gave rise to profuse hæmorrhage. After a more careful bimanual examination, he discovered an inversion of the second degree. This he treated by means of continuous pressure by cotton tampons covered with iodoform gauze. He explains this production of inversion, so late in the puerperal state, as follows: There was, in all probability, a retention of a small portion of the placenta which caused a local congestion at this point, under the influence of which the uterine tissues at the insertion of the placental polyp, became gradually more and more yielding until the contraction of the rest of the organ forced it through the partially dilated os.—*Univ. Med. Mag.*

OBSTETRICS.

THE VAGINAL OPERATION IN EXTRA-UTERINE PREGNANCY.

In an interesting paper in the *American Journal of Obstetrics*, April 5th, 1891, Dr. Fenger presents the following conclusions:

1. In cases where the fœtal cavity is still aseptic, the vaginal operation exposes the patient to danger of sepsis in the fœtal sac, which cannot be guarded against. Abdominal section gives far better means of protection against septic infection.

2. Hæmorrhage from the placenta cannot be controlled by the vaginal operation. By abdominal section, on the other hand, ligation of the internal spermatic and uterine arteries, as devised by Olshausen, might in some cases be accomplished as a means of checking hæmorrhage from the site of a removed placenta, in the territory supplied by these vessels. Abdominal section further

permits of ligature *en masse* of the bleeding portions when the placenta has been divided at the place of incision.

3. Delivery of the child at full term is usually difficult, and thus dangerous to the mother, by the vaginal operation, but easy by the abdominal operation.

4. If the fate of the child is to be considered, the vaginal operation must be abandoned, and replaced by abdominal section.

5. When suppuration has set in, in an extra-uterine pregnancy presenting low down in the small pelvis and the placental circulation has ceased, the vaginal operation may be considered in comparison with the abdominal operation.

6. The vaginal operation is strongly indicated in old suppurating fœtal sacs, with disintegrated fœtus presenting in the vagina.

ABSENCE OF UTERUS.

M. Delageniére (*Union Médicale*, April 7, 1891) read before the recent meeting of the French Surgical Congress, a case where a woman, aged 23, was entirely destitute of uterus and vagina. The presence of the ovaries was manifested, it is said, by periodical attacks of pulmonary congestion. Abdominal section was performed, and the ovaries, which lay in the iliac fossæ, were removed. Twelve days afterwards it was thought advisable to form by dissection a vagina, lined in part by the mucus membrane of the vestibule and in part by two large cutaneous flaps turned in from the gluteal region. Since the operation the patient's health had remained good. The attacks of congestion of the lungs ceased completely. The artificial vagina did not contract. M. Delageniére found that the ovaries were affected with sclerosis and cystic degeneration.—*Brit. Med. Jour.*

PÆDIATRICS.

INUNCTIONS AFTER SCARLET FEVER.

A correspondent who does not seem to possess much sense of logic, narrates the case of a patient convalescing from scarlet fever, in the course of which he was astonished at the early and extensive peeling that occurred, till one day, noticing the patient to be listless, with dry, brownish tongue, it occurred to him to try and fathom the significance of these symptoms. He found the urine smoky, and he elicited from the nurse that she had been using 1 in 40 carbolized oil by way of inunction. This having been discontinued and plain olive oil substituted the symptoms disappeared and all went well. To most practitioners this experience would appear in the light of a warning not to make use of an inunction which had proved itself to be possessed of toxic properties. Not so the correspondent in question. On the contrary, he infers from a review of the facts of the case, that it would be a good plan to use the carbolized oil, and to stop it immediately if any untoward symptoms occurred. Now we will venture to doubt the propriety of using oleaginous or, indeed, any inunctions, at all after scarlet fever. They must, perforce, seriously interfere with the eliminatory functions of the skin just at the time when the partial suspension of these very functions is throwing a strain upon the kidneys which not unfrequently determines a serious degree of congestion. To deliberately throw a further burden on the kidney by necessitating the excretion of a toxic and irritating body, savors of recklessness, and is certainly not to be commended. Our object should be to facilitate but not to precipitate desquamation, and this may be safely and adequately provided for by warm baths followed by friction.—*Med. Press.*

HYGIENE.

OF PSOROSPERMS AND THEIR IMPORTANCE.

The subject of psorosperms is at present exciting so much interest among pathologists in this country and in France, that it will be well to review the present state of our knowledge of these organisms. Psorosperms, also called coccidia and pseudonaviculæ, are classed by most zoologists amongst the protozoa or lowest class of animals, though Robin and a few other writers consider them algæ. Assuming that they are protozoa it appears probable that they form a stage in the life-history of the Gregarinda. Psorosperms usually occur massed together in cysts whose distribution in the animal kingdom is very wide, for they are found parastic in connection with the alimentary canal and liver of the higher vertebrata, in nearly all the organs of fresh-water fish, and in many of the tissues of the lepidoptera, orthoptera, and arachnids. They are most readily seen, however, in the livers of ill-fed rabbits, where they occur as small whitish nodules. In man, Dr. Delépine—who in a recent paper read before the Pathological Society of London

showed how carefully he has studied the subject—says that psorospermial cysts have been described as occurring in the alimentary canal, in the liver, spleen, kidney, urinary bladder, lungs, pleura, heart muscle, skin, and hair.

The contents of the cysts are numerous spore-like bodies, round, oval or spindle-like in shape, each consisting of a firm capsule which may be bivalve, and which contains protoplasm at first homogeneous but subsequently becoming transformed into sickle-shaped bodies endowed with active amœboid movement. These sickle-shaped embryos possess the power of penetrating epithelial cells, and, when they have thus obtained a local habitation, of growing and becoming nucleated.

Considerable importance has been attached to a knowledge of the development of Gregarinida from the fact that when psorosperms infect lepidoptera they may cause the death of their hosts, for it has been shown that they produce silk-worm disease.

It is only within the last few months, however, that M. Darier and Dr. Wickham in France, Mr. Bowlby and Mr. Jonathan Hutchinson, Jr., in this country, have pointed out the relationship which these organisms seem to bear to Paget's disease of the breast, and to some other forms of skin affection. In Paget's disease the superficial layer of the epithelium covering the nipple, is absent to a great extent, whilst the rete mucosum remains in patches, which are often vacuolated. The general appearance of the bodies in the tissues in this disease is shown in the drawing made by Mr. Jonathan Hutchinson, Jr., to illustrate Dr. O'Neill's report of this case. The "vacuoles" appear, by the light of recent observations, to be probably parasitic in their nature, since they are caused by psorosperms. If this hypothesis should prove correct, it will, of course, materially modify the treatment of the disease, for instead of extirpating it with the knife as the surgeon has hitherto done, it will be treated by the application of strong antiseptic solutions in the manner recommended by Dr. Wickham. The acceptance of this view will also necessitate a modification of the pathology of Paget's disease, and we shall have to agree with Mr. Bowlby, who believes that all changes in the breast are secondary to those occurring in the nipple, and are not in any way the cause of the so-called eczema. It is at present a vexed question whether the cancerous growths in these cases are or are not directly due to any specific action on the part of the psorosperms, but before this point can be settled with any degree of certainty, it is necessary to be able to cultivate the organisms. Messrs. Ballance and Shattock have lately declared that their experiments in this direction had been unsuccessful, whilst Dr. Delépine and Mr. D'Arcy Power announced that their work had yielded evidence of a positive result, though it was as yet too early to speak with any degree of certainty. The question, however, is one of great importance, and we shall watch with interest such further results as may be obtained.—*Brit. Med. Jour.*

MEDICAL CHEMISTRY.

METHYL-MERCAPTAN—C_6 H_4 S.

This substance gives to the urine voided after eating asparagus its peculiar odor,—as was recently ascertained by Nencki, after a futile attempt to determine the cause of this peculiar odor had been made before by Hilger. Nencki distilled the asparagus-urine, previously acidulated with oxalic acid, over a sand-bath, whereby the escaping gases were passed into a wash-bottle containing a 3% solution of mercury cyanide, which *retained* the methyl-mercaptan. According to Löw, the mother-substance of methyl-mercaptan in the shoots of asparagus is, in all probability, an organic sulphur combination of simple structure, accompanying the asparagin.—*Merck's Bull.*

MODIFICATION OF FEREIRA'S TEST FOR COCAINE.

M. G. Patein contributes the following to the *Répertoire de Pharmacie:* Into a watch-glass pour a small amount of the liquid that is to be examined, and evaporate carefully over a water-bath or lamp to dryness. Treat the dry residue with a few drops of alcohol of 95°, and add a small bit of caustic potash. If cocaine be present, on agitating the glass a powerful odor of benzoic ether will at once be perceived. This odor is very intense, and persists a long time. So delicate and certain is the test that the presence of a small fraction of a milligram of cocaine or its salts is easily determined.—*Nat. Drug.*

NEWS AND MISCELLANY.

PEPPER AND MUSTARD IN BRIGHT'S DISEASE.

An exchange says that a Russian physician has proved, by direct experiment, that pepper and mustard given to patients with Bright's disease, increase the excretion of albumen in all forms of the disease.

NEW YORK MEDICAL EXAMINER.

Dr. G. W. Wells, of New York, is to issue a journal known as the *New York Medical Examiner*. It will be devoted to medical matters connected with life, accident, and marine insurance, the army, navy, police, fire department, pension service, railways, etc. From its announcement it should prove a success.

MEDICAL SCHOOLS IN CINCINNATI.

Dr. James T. Whittaker says the medical schools of Cincinnati represent every freak, fraud, and frenzy of which the human mind is capable. There is a Hospital for every race, for every creed, for every sex, for every age, and at present rates there will soon be one for every disease and every doctor, as founders of hospitals and medical schools, are physicians, preachers, fashionable ladies, and men who have made fortunes by questionable means, as vending patent medicines.

HOW THEY MANAGE THE NEW-BORN CHILD IN TURKEY.

Dr. Weller, of Pottstown, Pa., in the Medical and Surgical Reporter, Nov., 1888 (old but good), is incited by Dr. Ay's article to offer a few suggestions as to the "management of the new-born child," while I, by Dr. Weller, am incited to note a few things in regard to the subject at the head of this article.

Dr. W. thinks "improvement has been made in everything else except in the custom of dressing babies." I think could he make a comparison of the customs of this land with those of the west, he would admit that there had been some "improvement" even in that. With your permission we will attend a cases of confinement, not as attending obstetricians (as that is seldom permitted), but as guests! On entering the house we find it pretty well filled with females, relatives and neighbors—especially if the labor has been somewhat prolonged. The patient, we will say, is a woman (?) of some fourteen summers, and has been married a year or less, and this is her first experience. Up to the hour of labor she could have been seen strutting around, as proud of her protruding abdomen as a Chicago alderman; for the finger of scorn is usually pointed at the childless woman whosever fault it may be. She, the weaker vessel, is always blamed until proof positive is presented that the other gender is the one to blame. But we came to see the baby, not the mother, who by this time is not half so anxious to be a mother as she was a day or two ago; and she may be heard declaring in a loud voice that she is going to die, and that she will never again, no, never, have another baby!

While we are waiting for the coming stranger, let us take a look at how they are treating the soon-to-be mother. Up in the far end of the one-roomed house we hear the groaning, and, as our eyes become used to the light, we see two women sitting on the floor; between them is a third one, whose arms are around the necks of the other two, while they have one arm thrown around her back, and the other supporting her in a half-sitting position. On looking closer we see the middle one is over a copper dish, that they use for a wash tub. If our eyes have not already seen, our ears cannot have helped hearing the voice of a fourth person—the midwife—who is sitting in the rear, her head planted into the region of the sarcum, her hands pulling away at some unseen object, and constantly calling upon the mother, "*dee! dee!*"—which if put into our language might be, "bear down! bear down!"

At last through a sufficient amount of pulling and bearing down, a faint wail indicates a new life, and a general stampede is made by all present, great and small, to get a peep at the new-comer, when from every quarter the cry goes up: "What is it"? "what is it?" If it should be a girl, you will notice a hushing up of all concerned, until some old mother in Israel present will remark: "It is the gift of God. Praise His name; all is well. If it should be a boy, light to your eyes! light to your eyes! May the blessing of God rest upon you," etc., will be the cry. The midwife is now lustily calling for a string and a shears. Now, my dear antiseptic brother, do not be too much shocked at the string and shears, they hunt up and bring to perform the operation. The string may be broken off from a ball of stuff rolling around under foot, while the shears—forgive me—is a pair that might have been used for

shearing sheep in the fourth century! Nevertheless they are sufficient. The tie is made, and the cord sawed off close to the abdomen, while a dozen voices sing out: "Take care, do not cut off the penis,"—a thing which sometimes happens.

The child is at last disconnected, and is taken from the hands of the midwife, who on no account will let go her hold on the cord until the after-birth is delivered, lest it might digress from its natural path, and find its way into her stomach and thereby smother her.

We follow the child. A rag is set on fire, and the still bleeding stump of the cord is well scorched, to prevent all further oozing of blood. He is then taken and rubbed all over with salt, wrapped up in some old rags, and fed with some flour and molasses. The latter is given to move his bowels, as the milk of the mother for the first day or two is not fit for him. The next day he is washed and dressed; his clothing is more suited to a two-year old than for a new-born infant. In this they might please Dr. W.; no bands, not even any dressing over the burned stump; no diapers, in place of which a large cloth, any color, is covered over with dry earth and placed under him next to the flesh; his clothes are then drawn down, scarcely coming to his feet. He is now laid on a large square wrapping cloth, which is folded up over his feet, and brought over so that but two corners are left out; they are carried around him two or three times, folding in arms and legs, when the whole is knotted up tightly, some taking extra pains to see that it is well tightened. This is to develop the muscles well, so that he may be strong (?). The head is tied up, a band going around it, and another under the chin—cap and bands each of a different color. He is now ready to be passed around, handed to any and all who come in to congratulate the new mother. If he gives a whimper they at once extract their lacteal resources, and apply them to the mouth of the infant, who in this way may partake from half a dozen or more breasts in the course of a day. They all think they are doing God-service in thus contributing to the support of the growing youth. You cannot imagine how convenient the child is for handling tied up in the way mentioned.

We will not change his clothing, nor wash him again for ten days; only the earth may be changed once or twice a day. After his second wash—at the expiration of ten days—he is not again washed for one month, after which he has a rest from water and all its bad consequences for six months. Then, if he is a good, healthy boy, he is allowed to go to the bath with his mother every fifteen days. In the meantime a great many of them become eczematous from head to foot. Their ears almost always become ulcerated before they are two months old, some of them lasting for years, and the ear becoming useless. Very few heads but what are bald ere they are ten years of age!

When he is a day or two old, he must try his new cradle—a primitive structure with a frame-work over it, to hold a blanket, which is thrown over it. He is always placed upon his back, tied in so snugly that no part of him can move except the head, which keeps up a constant motion with every move of the rocker. When he is put to bed, a small reed tube is applied to the water-course, and carries the fluid outside into a small tin pail suspended on a peg for the purpose, which is emptied as occasion requires.

Now I would ask Dr. Weller what he thinks of eastern customs.

The other day I was asked to see my hostler's wife, who was supposed to be in labor. I did not rush out at once, but stepped up stairs and put on my coat, and went to the house, just outside the yard. I went in, and found her on the floor groaning, with not a soul near her except a three-year-old child crying over her. As soon as she saw me she cried out, "Oh, I am dead!" I asked her what the trouble was. "I never had it happen so before." "What is it?" "Why, it has come." And sure enough it had come! So I went back to the house to get my pocket-case to separate the little fellow from his attachments. By that time the mother of the woman had come to lend a helping hand. What would our dear ladies at home think of such labors? And Dr. W., what would you do with babies coming on such an express train as that? And yet I agree most heartily with every word he says. I only wish there were more like him to urge on the reform. Here in Turkey we have but a few lying-in-cases—only those the old midwives cannot do anything with. Whenever I am called, I insist on the patient going to bed, and deliver them "a la Frank," and see that the baby is attended to "a la Frank" also.

At some future time I will write you something about the mothers.—*Trained Nur.*

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Clinical Lectures.

TRACHEOTOMY IN AN ADULT — FRACTURE OF THE SKULL—GUNSHOT WOUND OF THE CHEST—STRANGULATED INDIRECT INGUINAL HERNIA.

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TRACHEOTOMY IN AN ADULT.

Gentlemen :—The first case that I will exhibit this afternoon is one which illustrates the difficulties often attendant upon the performance of tracheotomy in an adult. In this instance, as you see, the patient deliberately cut his throat with a knife, the instrument passing horizontally across the neck immediately above the upper margin of the larynx, dividing the epiglottis and penetrating as far posteriorly as the anterior wall of the œsophagus. When he was brought to the hospital he had lost a considerable quantity of blood and was breathing with more or less difficulty through the opening made in the neck by the knife.

As there was marked dyspœa npresent, with evident congestion and œdema of the sub-mucus tissues of the glottis that threatened suffocation, it was found necessary to perform a prophylactic tracheotomy, but owing to the severance of the muscles which connect the thyroid bone with the larynx, there was a wide separation of the tissues, resulting in the collapse of the trachea and elevation of the hyoid bone through want of action of its antagonists in the opposite direction downwards. Hence, the difficulties that lay in the way of exposing the trachea and inserting a tube.

It is well to remember that normally in a child up to the fourth or fifth year, the rima glottidis is on a level with the intervertebral disc of the third and fourth cervical vertebræ, but after adult age is reached it has sunk to a level with the fifth intervertebral cartilage, so that while in early childhood the aperture of the glottis may be readily defined with the index finger passed through the angle of the mouth, after adult age, this is impossible, as it lies not only further down, but further forward, and is accordingly difficult to reach. The trachea is normally deeper in the adult than in the child. From the inner surface of the intervertebral notch the tracheal rings are separated for a distance of fully an inch and a-half, which space is occupied by the thyroid body, muscular and cellular tissues and the integument, all of which are exceedingly vascular.

In the case of this patient before it was possible to expose the trachea, it was found necessary to forcibly lift it out of the thorax into which it had collapsed. Besides, as a result of the incision through the tissues of the neck, there was an extensive infiltrate through all the parts, both external to and beneath the deep cervical fascia, so that the distance from the surface of the integument to the trachea was nearly three inches.

Under these circumstances, there are many difficulties in the way of performing a tracheotomy, which, if you are prepared to meet, might cause you no small amount of trouble. The first difficulties lay in the fact, that as we seldom or never tracheotomize except when the patient is suffering from stenosis of the larynx or air passages in some part of their course, the administration of an anæsthetic often becomes an impossibility as the inflamed condition of the mucus membrane of the air passages occasions such extreme sensitiveness that the inhalation of the anæsthetizing agent is attended with violent coughing spasms, and sometimes the arrest of breathing altogether. Accordingly, in this case, we will employ a method which may be described as the Reclus-Dawson plan of performing tracheotomy, that is, to cocainize the parts by the use, hypodermically, of a

one per cent. solution of the hydrochlorate of cocaine, using about a hundred drops of this solution both in superficial and deep injections, as laid down by Reclus in the use of this anæsthetic in surgical procedures. The next step in the operation is to make the trachea dry and free from blood, as recommended by Prof. Dawson, of Cincinnati. This is done by compressing all the bleeding parts by means of forcep pressure clamps, as each layer of tissue is exposed until the bare trachea is reached. Two great dangers are eliminated by this procedure, first of which is the danger of the escape of blood into the trachea, and the second is our ability to now dispense with a general anæsthetic.

Dr. Manley proceeded to perform the operation according to the plans here advised and no difficulty whatever was encountered in exposing the parts; during which time, the patient appeared to be perfectly free from pain or inconvenience. When the trachea was opened and the tube introduced the respirations were carried on with a marked freedom from oppression or distress.

FRACTURE OF THE SKULL.

The second patient is that of a boy, nine years old, who was brought to the hospital eight days ago suffering from a fracture of the skull sustained by falling from a height of forty feet into the back yard of the house in which he lived. When brought to the hospital by the ambulance surgeon he was in a state of most profound collapse. The integument was cool, the pulse irregular, slow and thready, and he breathed in a sort of spasmodic gasp. On entering the hospital he was placed in bed, hot applications made to the extremities, and after the lapse of some six hours, re-action gradually became established and consciousness returned. At this time I saw him and on examination found a well-marked depression of the skull in the tempero-parietal region just above the right ear anteriorly. Associated with this was an extensive infiltration of blood into the subconjunctival tissues of both eyes and a copious hæmorrhage from the nose, which latter had, however, largely ceased when he came under my observation. In other words, there were definite and positive indications of depression of the cranial bone at the seat of injury, besides fracture of the anterior fossa of the base of the skull. No paralysis had developed or convulsions of any sort, and apart from the general shock that he had suffered, his condition was fairly good. Now the question comes up, what line of treatment is proper to follow in conditions of this description; in children in whom, we have evidences of fracture of the cranial bones; but in which, there are no objective symptoms of extensive cerebral hæmorrhage or destruction of cerebral tissue? I have been taught from practical experience to follow an extremely conservative course, in such cases and one, from which I have made it a rule to never deviate; that is, to leave alone, unless indications for interference are clear. I have found, in operating on the crania of children, that the cranial bones and peri-cranial tissues are extremely vascular, and despite any precaution that you may take to prevent it, considerable blood is lost before the membranes of the brain are exposed. A condition usually, very badly borne, by a growing child and one apt to result in very serious consequences. Furthermore, the meninges of the brain and the cerebral tissues of a child are very susceptible to the irritating action of atmospheric influences, antiseptic solutions, or digital manipulation. In the majority of cases of children, where I had found it necessary, to open the dura-mater, for fractures or suspected fractures of the skull, traumatic meningitis developed, and in spite of every effort that could be brought to avert it, it generally ended fatally. It is for this reason I have always deemed it safer to pursue the conservative course in traumatisms of the skull in young children.

The ecchymosis beneath the serous tissues of the eyeball has already, nearly undergone complete absorption and the boy's general condition is excellent.

GUNSHOT WOUND OF THE CHEST.

The third patient that I will show you is a young man of powerful physique, who sustained during a quarrel, a gunshot wound of the chest. The ball penetrated the right pleural cavity an inch and a half to the right of, and about one inch below the nipple of the right breast, taking a downward and backward direction.

After admission to the hospital, the patient complained of a persistent pain in the abdomen and an extreme sensitive or moderate pressure over all its areas from the pubic bones up on either side.

Physical examination revealed no positive evidences of effusion into the right pleural cavity, but on the third day of his admission the pain gradually spread from the umbilicus upward, and it was then evident that he was suffering from a pleurisy, probably induced by the escape of blood from the lung into

the pleural cavity, which excited a hypersecretion of the serous membrane of the pleura. Now, septic infection had developed, and this was a positive impossibility to prevent in cases of penetrating wounds of the lung, whether done by an instrument or by a bullet, no matter how you may treat the external wound.

Accordingly, the indications for treatment are generally clear. If we are to give our patient the best chance of recovery, we should make a free incision through the walls of the thorax, either over the point of entrance of the bullet, or at its most dependent part, and remove whatever purulent or extravasated accumulations, or other matters that may have been carried in by the missile. Then, thoroughly irrigate and drain the pleural cavity, and apply the dressings so that future drainage and irrigation can be kept up until a cure has been brought about.

The operator then directed the patient to be turned on his left side, and after the integument had been carefully cleansed and rendered thoroughly aseptic, an incision was made into the nineth intercostal space, the scalpel taking a downward and forward direction. After the pleura was exposed, it was divided, and with a sharp rongeur, the greater portion of the shaft of the nineth rib for a distance of about a half an inch immediately over the incision, was exsected. This gave vent to a very large discharge of a sero-sanguinilant fluid, mixed with flocculi of lymph, tinged a deep-yellow bile color, thereby clearly indicating the fact that the bullet must have taken a downward direction, passing from the diaphragm into the liver, and possibly into the peritoneal cavity; otherwise, it would be difficult, to account for this backward flow of the bile through the diaphragm into the pleural cavity. Under these circumstances, the prognosis would be very bad, because, without doubt, the peritoneal cavity had been opened by the missile and septic infection had already commenced. The beneficial effects of the operation would be then local in its action and would be confined to the function of respiration alone. If the bullet had not, however, passed through the liver but was encapsulated and if a purulent formation should develop, his chances of recovery were best secured through the backward vent for this accumulation up through the diaphragm and out through the intercostal opening.

Two drainage tubes were then introduced through the opening made by the rongeur in the rib, and antiseptic dressing applied. The patient rallied well from the ether and expressed himself greatly relieved when consciousness had returned.

STRANGULATED INDIRECT INGUINAL HERNIA.

The next patient presents a few features of considerable interest in his history. He is a colored man, 40 years of age, and has suffered from hernia as long as he can remember, though it has not been of very large size. He has been able to get along very comfortably by the use of a truss until about two years ago, when he developed a strangulation of the intestine which he was not able to restore as formerly. A physician was called in who, by the use of topical applications and moderate taxis, succeeded in replacing the bowel. From that time on he wore a truss continuously until about two days previous to his admission to the Hospital when one morning he neglected to put it on, on going to work. While engaged in lifting a heavy load he felt something give way in the neighborhood of his groins which at once attracted his attention. He noticed a very large lump occupying that part of the body, and this was soon followed by extreme pain in the back, persistent vomiting and great weakness. He tried in vain to reduce it working at it for over an hour until at last a physician was sent for.

When the patient was brought to the Hospital, the house-surgeon employed as much taxis as he considered within the limits of safety to the patient, giving him a hypodermic injection of morphia, applying ice-bags over the protrusion, elevating the pelvis, and making continuous pressure over the hernia, but all to no purpose. Now, the strange feature of the case came up, and it was not peculiar to this case alone; for I have seen it occur four times, at this Hospital within the last six years; and that was, notwithstanding all that the house-surgeon could do to reduce the hernia, when the patient went to sleep, the protrusion gradually returned to the peritoneal cavity of its own accord. So when the doctor was making his evening rounds of the ward, when the patient awoke from his sleep, he found that the hernial protrusion had spontaneously disappeared.

The operation which I shall now undertake is not done with the view of curing the hernia, for no operation that has been yet devised can bring about that result, but for the purpose of placing the hernia in a posi-

tion in which it can be comfortably controlled by a properly adjusted truss. My experience has led me to perform no hernial operations, except in uncontrollable, painful and strangulated cases where surgical intervention is justified in order that it may be more easily and safely controlled in the future, by means of pressure. With regard to the form of operation I shall employ in this case, I would say, that there is no particular variety of operation that is applicable to all kinds of hernia. There were some operations in which a division of the canal, liberation and enucleation of the sac were performed, but then these were hernias which had no sac, as, for instance, the congenital variety, or a hernia which bursts through the peritoneum and comes down through the divided slit without any peritoneal investments. In other cases, the inguinal canal could not be divided because there was no canal in such cases; as for instance in a case of direct inguinal hernia where the protrusion carried the conjoined tendon down with it instead of the intercolumnar fascia. In those large, old protrusions, in which by the size of the hernia and the gradual distending force of its walls, the inguinal rings approximate and no inguinal canal is found to exist.

As for doing the open method or the closed one, in this case I shall be wholly guided by the circumstances as I shall find them. If the case is a recent one of strangulation and there were extensive accumulation of foul, fœtial secretions and danger of infection of the peritoneum, then I would by all means, treat the patient by the open plan, as it affords freer and fuller exit to the septic material.

But, if on the other hand, the process consisted in replacing the protrusion, closing in the inguinal rings and affecting a temporary cure, with such restoration of the parts as would render the ultimate wearing of a truss a comfortable procedure, I would then sew up the primary incision from end to end, taking care only to secure a homologeous approximation of the different coverings of the hernia from the serous membrane to the integument. I should employ no drainage except a small twist of cat-gut at each end of the wound.

The patient having been placed under the influence of ether and the parts shaved and cleansed, first with soap and water and then with a bichloride solution of 1–2000, the operation was commenced by making a free incision over the seat of the hernia, beginning over the center of the external ring and bringing it down to within about an inch of the base of the scrotum. The parts were then freely and rapidly divided and the sac exposed. This was then opened after it had been completely freed from the elements of the cord and it was found to contain a large serous effusion, about six inches of the small intestine, the whole of the appendix vermiformis, and but a slight fringe of omentum. In the large majority of cases of inguinal hernia it is important to bear in mind this fact that the segment of intestine which comes down will be almost invariably found to be that part of the ileum which terminates in the caput coli. After the intestine had been returned to its proper position in the abdominal cavity the parts were then freely irrigated with a 1–10,000 solution of bichloride of mercury, the sac was put upon a stretch, twisted at its neck and ligated high up with a strong silk ligature. It was then divided below the point of ligation and the divided neck of the sac was permitted to retract into the abdominal cavity. The widely separated pillars of the external rings were next drawn together by two strong sutures, and the parts below having been thoroughly irrigated, were approximated layer by layer; the cutaneous incision sewed up from end to end, with no drainage, except at the scrotal end where a small drainage tube was inserted. Iodoform and biclhoride gauze dressings were now applied over the wound and the patient was returned to the ward.

TREATMENT OF FLATULENCE.

Flatulence is a trouble that sometimes defies medical treatment. A French journal recommends the following:

℞

Naphthol.....f3j.
Carbonate of magnesium.....3j.
Powdered charcoal.....3j.
Essence of peppermint.....gtt. ij.

This is to be divided into fifteen powders, and one taken at the beginning of each meal.

When the flatulence is accompanied by constipation the following may be used:

℞

Magnesium sulphate.....3j.
Flowers of sulphur.....3j.

To be made into fifteen powders, one of which is to be taken at each meal.

When diarrhœa accompanies the flatulency:

℞

Bicarbonate of sodium.....grs. xxx.
Prepared chalk.....grs. xv.
Powdered nux vomica.....grs. iij.

May be made into ten powders, one of which is given with each meal.

—*Pharmaceutical Record.*

TRAUMATIC MENINGITIS; FRIEDERICHS ATAXIA IN A CHILD.

BY DR. J. MADISON TAYLOR,

DELIVERED AT THE CHILDREN'S HOSPITAL, PHILADELPHIA.

Gentlemen:—I have asked the mother of this little child to come and show it to you. They came in my office just as I was leaving. It seemed to me of interest that you should see a well marked case of recovery after a pretty bad traumatic meningitis. This child applied to me to-day for some triviality, but in the main, as you see, it is very well and strong, thoroughly well grown and nourished; in fact, it is a singularly muscular girl. The history of her trouble is as follows: When seven weeks old the mother had left her in the house with an older child, in her absence. When she came back, shortly thereafter, the little one had evidently been shaken or cuffed by the older child, because she was found in the very act of doing so. What injury the little one received it is impossible to know. She certainly was very much knocked about, the mother thinks thrown several times against the floor. The child who did this had notably a very bad temper, and the injury might have been even greater than could be known. Certainly the back of this one's head was very much bruised and battered, and she was completely black in the face, shocked, and reduced to a condition of almost palsy. From that time until several months old she was in a miserable sickly condition, ailing all the time, and upon the slightest provocation rejected all food unchanged. The mother nursed her, hence she got the best of nourishment; but, as I say, her condition was wretched until about fourteen months of age. When I first saw the case it had evidently a very high fever, and was exceedingly painful to handle. There was no part which could be touched without making it cry out, and hence after a hasty survey I diagnosed rheumatism; but upon my next visit I was enabled to make a more careful study and also learned of this injury described, and then found other evidence that it was manifestly a meningitis. Later the pupils became mere pin points, the limbs in constant painful contracture, the abdomen cupped and contracted, the head thrown back in a condition of opisthotonos, the eyes were kept closed, nothing was held on the stomach, not even water, and for ten days she did not sleep nor retain any food. All this while the bowels were obstinately constipated. The temperature I have no record of, but it was extremely high. The pulse slow and hard. The case lasted for about a month and got entirely well. The value of this is not so much simply as a case of typical, traumatic meningitis, as that it should have gotten so well; nor was the treatment used anything especially suggestive,—counter-irritation along the spine and the nape of the neck, hot mustard water, quieting medicines and carefully pre-digested food. But now the real interest centres in what effects are left from a case of this kind, and from such opportunities as these, much may be learned. One rather remarkable thing is that there seems to be no evidence of any malnutrition or lowered health in this child now. The digestion is excellent, general vigor good, and as I remarked before, the muscular development is singularly fine. The child is exceedingly intelligent, a little bit over shrewd perhaps, and with a trifling tendency to be cunning, but one very noticeable feature about it is an easily aroused and violent temper. It is interesting to consider how many subsequent mental peculiarities may be traced to some early brain injury of this or other kinds. I have in my mind the very noticeable instance of a daughter of a prominent literary man, who was herself remarkably clever. She and her sister had, you might say, a continental reputation for cleverness. This gentleman had been diplomat at a foreign court, and there both these daughters shone in various ways. The girl, when I knew her, was about 20 years of age, and insane. There was history of a very fair amount of intellectuality; she had written some clever poems, and was exceedingly interesting personally and in conversation. Nevertheless the mental obliquity was unquestioned, and was regarded by those who had her under advisement as probably most serious. From an accidental circumstance she died suddenly, and it was because of this that I was enabled to make an autopsy. Barring some disturbance of her uterine appendages, there was little amiss except evidences of a slight meningeal thickening, symmetrical in character, which was probably the result of a very severe attack of scarlatina as a child. There were then, I believe, as nearly as the parents could recollect, symptoms which might have been attributed to a meningitis. Afterward the temper of this girl had been notably erratic until it

culminated, as I said, in a condition of mania most distressing.

Now the lesson from these cases is that while of course every effort must be made with absorbents and such like remedies to try and relieve adhesions and thickenings, if indeed that be possible, our chief hope is that something in the way of treatment may be had from thorough and careful mental training so soon as a condition of this kind is recognized.

The next case I have to show you is one of considerable rarity although the total cases reported amount to something over two hundred. This little boy of nine years of age applied first at the Dispensary some weeks before I saw him for an irregularity in his movements which was pronounced chorea. Indeed he was treated systematically for chorea and seemed to improve under it. When I first saw him there were certainly choreic movements in the hands but they were so slow and so irregular that they had not even the irregular regularity which chorea has; and in causing him to walk to and fro on the floor, his gate was so manifestly bad that the possibility of his having some motor ataxia suggested itself, and upon examining him I found the knee jerks entirely gone. There were other symptoms which I shall detail presently which made me think the case one of locomotor ataxia, an exceedingly rare disease in childhood. In fact it is pretty nearly determined, certainly most observers now admit, that it is scarcely possible for a case of true locomotor ataxia, or sclerosis of the posterior columns of the cord, to exist in childhood at all. Of the reported cases, while some few seem to have the regular symptoms of locomotor ataxia, yet are the notes not sufficiently clear to make us certain that they were not what I think this case to be, namely, one of F. Friederich's ataxia. Now I will rapidly go over some of the leading features of this boy's case. I have looked pretty thoroughly into his history which is about as follows: The family records are thoroughly free, so far as I can make out, from any evidence of similar disease. The immediate family consists of seven children, of which he is the fourth, all robust and hearty, of Alsace parentage although born in this country. Until the age of eight years this boy really had no grave illness; he was always strong and well. In June last, however, at which time the mother thinks he was about the plumpest and best favored of her children, the various phenomena which I will detail, commenced to appear. Before that, however, it is well to mention some evidence of there having been ataxic symptoms. For at least a year the child fell too readily while at play; about his nose and face are numerous scars from contusions he then received. In June last there is a rather vague history of a fright caused by some boys who either chased him or did him some bodily harm, actual or possible. There is also some suspicion on the mother's part that he received a severe blow or kick on the end of his spine, but this is not definitely known. Before June, then, there was little or nothing to call attention to him except that he stumbled about irregularly. At that time, however, the clumsiness greatly increased, and was shown chiefly in the hands; he dropped dishes and other things from them. He could scarcely feed himself so great was this disturbance. He was taken to a physician and quite naturally, it would seem, the disorder was pronounced to be chorea, and treated accordingly. In a few weeks this passed entirely away, and also there were other notable phenomena observed, such as the loss of whiteness and gloss to the skin which became muddy and yellowish, the muscles fell away from their customary plumpness, and even now, as you see, are flabby although fairly well developed. There was nothing particularly noticed about his speech which, is observed to be slow and scanning, but his mother assures me that since his earliest capacity for speech he has always spoken slowly and hesitatingly. Also, as you notice, the saliva has a tendency to dripple from his mouth. This is not new nor particularly well marked. Upon examination you will note he is a fairly grown lad, with well nourished body and of good color. His expression is dull, the mouth is held habitually open, and the slight salivary leaking can be seen at the corners of his mouth. His attitude is not alert, the head is thrown forward, and I am told he usually looks upon the ground as he walks, showing clearly a degree of uncertainty in his movements which is characteristic. The skin, is also of a greasy yellow appearance, and upon touch you notice that it is very flabby and loosely attached to the muscles. Examining the spine as we now do there is no irregularity noticed nor is there any tenderness upon pretty vigorous thumping of his back. Examing the coccygeal region there is nothing noticed in the way of an old injury, nor does he complain on pressure or blows there. His heart is distinctly flabby with feeble sounds, and a rough systolic murmur is heard. The pulse is quite rapid and irregular. Now we come to ex-

amine the most noticeable feature, namely, his lack of power to stand. Standing thus before you the poise is quite unsteady. If I bid him bring his feet together, even with his eyes open, there is a notable sway back and forth. When I tell him to shut his eyes at once you observe the sudden reeling forward and to the right. The measurement of this sway is about two inches in each direction. This, in examining ataxics, is called the station, and we describe it as an antero-dextro sway of about two inches in each direction. When he walks you observe that he throws his heel down first and quickly follows it by the ball of the foot, as if he wanted to get as broad a base as possible on which to stand. This is true of ataxics always and gives them the characteristic gait. The foot is thrown forward suddenly and with a tendency to spread itself out as far as possible and thus widen the base. On turning quickly, the toe of one foot almost always touches or strikes the heel of the opposite foot; so much so that if I make him do this rapidly two or three times it will actually cause him to fall. Now upon examination of his legs still further we find the knee jerk entirely gone, the ankle jerk entirely gone, and all the tendon reflexes about the lower limbs have disappeared either directly or upon reinforcement. It is just as well here for me to explain this phenomenon of reinforcement. When the tendon is struck from which you expect to get areflex, it frequently happens that little or no result is seen, but when you can get the patient coincidently to this to make some decisive muscular act, as the closing of the hand quickly, or even the winking of the two eyes quickly, the motor wave, as we may call it, is increased until the tendon jerk is also enhanced and made more noticeable. Here you see the tendon jerk is utterly gone. Upon examining the arms the biceps tendon is made easily to re-act upon the simple blow, and really to act exaggeratedly upon reinforcement by clenching the other hand; so that although there is distinctly some ataxia in the arms, still the tendon reflexes are present, although the accuracy of the movements of the hand are notably lessened. For instance, you see with his eyes closed if I tell him to touch the tip of his nose quickly with the front finger of either hand, he misses the point by an inch or two each time. Also, even with his eyes open, upon buttoning his coat he fumbles clumsily. There is one other reflex easily noticed in this child, and that is the jaw jerk, rather an important one because we may have a reflex present here and yet those from the lower limbs and upper limbs quite gone. Now then, as to the question of what is called static ataxia, that is the power to hold any part of his body steady under the impulse of the will. For instance, I tell this boy to hold his two hands out in front of him spreading forth the fingers, and you see a decidedly irregular movement in them in strong contrast to that of a healthy boy who could quite easily do this. Upon grasping objects, however, which has also to do with this symptom, there appears to be no special defect.

Again, the muscles of the face twitch irregularly but slowly, showing that the balance of muscular activity is well below par throughout the entire body. Doubtless this feature, irregularity in the movements of the muscles of the face, helped to make the diagnosis of chorea earlier in his history. There is no definite tremor, although tremor is a common feature of this disease, nor is there any spasm, nor palsy, nor contracture. There is also an entire absence of pain now, or at any time. Electrically there is no particular change in his muscles, nor, indeed, is there any characteristic electrical symptoms recorded in this disease. My friend, Dr. Oliver, who has taken great interest in examining the cases of this malady for Dr. Griffiths in the very elaborate and complete study which he made of it, has also kindly given this boy a thorough overhauling, the conclusions of which are as follows: The central vision for both form and color is normal in each eye. The power and range of accommodation are, however, lessened. The visual fluids are very slightly contracted, the pupils are about the same size, the irides equally and freely mobile to light stimulus and convergence, but quite sluggish to accommodative efforts. There are no coarse changes in the intraocular media or fundus. You see we have here just the reverse symptoms from those of the Argyl Robertson pupil, which should re-act less well for light than for accommodative efforts. In short, in this disease there is a much more general disturbance of the muscular activities than there is in the true locomotor ataxia.

Now, of course, in a clinic of this kind it is always interesting to say something as to treatment. I wish it were possible to give any hope that treatment of any kind, shape or degree could be of value here. Unfortunately, since in none of the reported cases has there been any definite improvement except spasmodically and in the way of nutritional gain, yet there has been nothing

found in any way to limit the progress of the disease or to regain lost ground. Such cases usually live a reasonable lifetime in varying degrees of helplessness, but little may be hoped from any line of treatment except such as is directed to the general health.

Very rarely does this disease progress rapidly but not the less surely, and while it is quite common for its victims to die of other causes than it, nevertheless barring any other reason, of this they will infallibly die soon or late. It is quite possible, however, to prolong the existence of these victims, and inasmuch as we are seemingly on the track of new and improved methods of treatment for true locomotor ataxia, so may some of these help us in this trouble. The treatment by suspension, of which so much was hoped, is still pursued in many special hospitals, and my own experience with it has been many times encouraging. Certainly I have seen certain features of locomotor ataxia obviously helped by this.

COMMUNICATIONS.

THE RELATION OF LACERATION OF THE CERVIX TO MALIGNANT DISEASE AND ITS TREATMENT.

BY WILLIAM E. ASHTON, M. D.,
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We will first consider the condition of the neck of the uterus as to the presence of lacerations in women who are suffering with cancer. The fact must not be lost sight of that the vast majority of these women consult the surgeon at a time when their disease is far advanced and when it is impossible to determine whether or not a laceration be present. Therefore we must depend upon the child-bearing history of our patients, for, if a woman has borne children, it is fair to presume that her cervix has been the seat of a more or less extensive traumatism as it is exceedingly rare to find a parous woman with a virgin neck to her uterus.

During a period of eleven years 63 women with cancer, presented themselves at the clinic for diseases of women in the Jefferson Medical College Hospital. The histories of 5 of these patients were incomplete, there being no notes recorded as to child-bearing. Therefore, in considering these statistics, we must necessarily exclude these cases. The remaining 58 women all had borne children with one exception and the diagnosis in this case is far from certain, as no microscopic examination was made, the notes merely stating that she was sent to the ward and curetted.

The following table shows the age and the number of children borne by each woman of the 58 cases of cancer at the Jefferson Medical College Hospital:

Age at admission	23–30	30–40	40–50	50–60	60–67
No. of women for each period...	3	13	16	17	9
Total					58

No. of women...	1	12	5	9	4	5	9	2	2	4	2	1	2
No. of children each	0	1	2	3	4	5	6	7	8	9	10	11	13

Totals:

No. of women	58
No. of children	267

We find by studying this table that the average number of children borne by each woman to be 4.6. This is about the same average as is given by Emmet,[1] who in a report of 51 cases of cancer found in the aggregate 228 children, which gave an average for each woman of 4.47. Hoffmeier, quoted by Winckel, found the average number of deliveries to be 5.2.

The above table shows only 3 cases occurring prior to 30 years and 9 cases after 60 years. Therefore the period between 30 and 60 years would seem to be the most likely time for cancer of the uterus to develop.

Winckel[2] says: "The large majority of women with cancer are married. Of my patients only 1.7 per cent. were unmarried and two-thirds of these 1.7 per cent. had given birth to one or more children. Difficult labors, i. e., protracted or instrumental deliveries, are very frequently part of the history of these cases."

Winckel does not believe that pregnancy and labor alone can be looked upon as causes of cancer of the uterus but that "such a termination is apparent after numerous and difficult labors." In other words, labors which produce lacerations of the cervix are liable to cause cancer. Hoffmeirer, quoted by Winckel, found in 812 women suffering with cancer only 4.8 per cent who were nulliparæ. Gross[3] says: "Epithelioma of the uterus is most common in married females that have borne children. Goodell (Lessons in Gynæcology 1887) tells us that "of several hundred cases of cervical cancer brought to my attention, I have not met with a single

[1] Principles and Practices of Gynæcology p. 511.
[2] Winckel's Diseases of Women-Parvin, 1889.
[3] System of Surgery vol. ii. p. 891.

one in a virgin, and only two cases in undoubtedly sterile women. One of these two, however, although an exception to the rule, singularly confirmed it. The lady had a fibroid tumor which slowly enucleated itself. After she had suffered much pain and had lost blood for several weeks. I was called in and found the os uteri dilated to the size of a silver dollar. I easily wrenched the fibroid from its attachment, and delivered it, but with some difficulty, as it was larger than the os. A few months later cancer of the cervix set in, from which she died."

It is not necessary to bring forward other statistics showing that a large per cent. of women who have cancer of the uterus, have borne children and I will therefore not take up further space in stating facts about which there is a united professional opinion. The point, however, which I do desire to bring forward is that labor means more or less traumatism of the neck of the uterus. If this be true, and I firmly believe it to be so, we then have by knowing the child-bearing history of a woman suffering from cancer a strong presumptive evidence of the presence or absence of a laceration of the cervix uteri.

Having shown that it is the exception to meet with cancer of the uterus in a nulliparous woman we will consider the question, does a laceration of the cervix predispose to or cause malignant degeneration? The etiology of malignant growths is still unfortunately far from settled, as the various theories which have been from time to time advanced but too clearly prove. To my mind, however, the local inflammatory theory of Virchow is the one most fully sustained by clinical facts and by the concensus of professional opinion. I shall, therefore, in this paper, limit myself to the views of Virchow leaving out of the question the dyscrasia, nervous and spontaneous theories. Neither shall I refer to the view that abnormal growths are due to micro-organisms as this theory is at the present time far from being demonstrated. Furthermore even granting that pathogenic forms of protozoa are the cause of new formations it would in no wise weaken the view as to their local origin, for the micro-organisms would simply be the exciting, not the predisposing, cause. Formad[1] in discussing the various theories opposed to the views of Virchow, says, "as ingenious as they are, can hardly, at present, be regarded as theories, but must be called hypotheses, for so far, not a single tumor can be proven to have really developed from the causes promulgated." Virchow, quoted by Formad, says, "we also know that on mucus surfaces tumors occur for the most part in such places where there previously was a simple inflammatory disturbance; e. g., where the simple inflammatory catarrh precedes the growth of polyps and polyps may develop into cancer. In cancer of the stomach there is always seen a gradual transition of the catarrhal products to carcinomatous structure * * * *." We next come to certain regions of the body which, from their situation and the character of their function, are exposed to irritation and injuries; e. g., the stomach, sexual organs, bones, skin, and the different orifices. If we make an estimate of all malignant growths, we find that most occur at orifices and at the orifices which are exposed to the greatest injury, consequently those of the digestive and sexual apparatus are most affected." Dr. Woodward[1], U. S. A., and Samuel,[2] of Konigsburg, both agree with Virchow. The former states that, "The origin of the first growth was always to be looked for in local influences. Former injuries of one kind or another could be affirmed in a large number of cases to have preceded the development of the disease and, though frequently the patients had lost all recollection of the original harm, yet it is in this direction we ought to look rather than seek to explain away the real difficulty by invoking the aid of an imaginary cachexia." The latter takes even a stronger view as to the inflammatory theory and says, "The idea of excluding or even limiting the causative relation of chronic inflammation to neoplasm leads far astray from the right path." In epithelioma of the lip we have strong clinical evidence of the malignant growth being of a local inflammatory origin, as the history shows an irritation of long standing caused by the stem of a pipe and heated tobacco juice. Again, we frequently find cancer of the tongue associated with a rough and uneven condition of the teeth. Gall stones have frequently been shown to have proceeded cancerous disease of the gall-bladder; their presence having set up a catarrhal inflammation which eventually produced the new formation. Long continued pressure, cicatrices, the situation of an external injury and ulcers have all been fre-

[1] Etiology of Tumors, Trans. Path. Soc. Phil. vol. X, 1879–81.

[1] Etiology of Tumors, Trans. Path. Soc. Phil., vol. X, 1879–81, Formad.

[2] Ibid.

quently noted as the seat of malignant degeneration. Formad goes so far as to believe, "that all tumors are products of the inflammatory process, and that they should be considered as one of the terminations of inflammation."

The tissues of the neck of a uterus, which is the seat of a laceration, are in a precisely analogous condition as that of other parts of the body which undergo malignant degeneration the result of a chronic inflammation. Furthermore, the position and the function of the cervix renders it especially liable to the inflammatory process. In its relations with the vagina it points directly posterior and slightly toward the left side, resting, as it were, in the posterior cul-de-sac. It is not fixed in this postion but is moved upwards and downwards by the action of the diaphragm, while the abdominal pressure still further tends to keep it closely in apposition with the vaginal wall. Finally, the penis, during the act of sexual intercourse comes into direct contact with it. Therefore, this constant irritation to which the cervix is exposed as the necessary result of its position and mobility, tends decidedly, if it be the seat of a traumatism or of a so-called erosion, to produce a chronic inflammation which may become malignant. Another cause why the cervix is especially liable to an inflammatory process, is on account of its great glandular activity. Parvin[1], in speaking of the structure of the neck of the uterus, says. "The glands, which are so abundant in the cervix that Spiegelberg calls it a great glandular apparatus, are not tubular, like those of the corpus, but racemose." It is a well known fact that inflammation is more liable to occur in organs whose functions are active, and in the cervix we have a structure in which this condition of glandular activity is present, and in which, as the result of a traumatism, chronic inflammation occurs. That the glandular structure of the cervix does enter largely into the consideration in determining the causes of cancer of the uterus is clearly shown by Cushing[2], who says. "What are called erosions, ulcerations, etc., are various degrees of one process, which consists essentially in a new-formation of glandular tissue, on the surface of the vaginal portion, or in the cervical canal. The follicles and cysts are not usually enlargements of prëexisting ducts, but new-formed glands without ducts. In ectropium there is essentially the same process going on in the cervical canal, thus everting the lips. In a comparatively large number of cases, cancers of the cervix are preceded by this condition of gland formation, or, to state it otherwise, when inveterate not infrequently becomes cancerous." * * * * "Where there is a laceration, of course the cervical canal is more accessable, and more ready to take on a diseased action." In the discussion following the paper of Cushing just quoted from, Baker said, that he considered erosions a cause of cancer of the cervix, and that they were of importance even when slight. He advised immediate treatment to avoid the possibility of cancer developing. Strong also stated his belief in lacerations of the cervix being a cause of cancer of the uterus, and said that in the large number of cases of malignant disease of the cervix that he had seen at the Mass. General Hospital and the Free Hospital for Women, not one occurred except where pregnancy had existed.

Wyman[1] holds that "the part of the womb most frequently attached is the neck. It is probable that the injuries which this part receives in parturition, operate as a cause of the disease." Dunning[2] is of the opinion that "cancer of the uterus is frequently of local origin due to local irritation. Emmet's discovery of the pathological conditions due to lacerations of the cervix uteri has emphasized this fact. Few will go so far now as did many a few years ago, when it was the fashion to ascribe the vast majority of uterine diseases to lacerations of the cervix, yet the fact is well established that injury to the cervical tissue, if allowed to go unattended, will sometimes act as an aetiological factor in the production of epithelioma of the cervix." Spanton[3] in a paper on lacerations of the cervix uteri, states that "the importance of this condition has been made more manifest since recent observations have shown that it may be the precursor, if not actually the cause, of a large number of uterine ailments. Dr. Thomas enumerates no less than twelve of these as resulting from laceration of the cervix, and among them he places epithelioma. Other authors state the same thing, while some go so far as to declare that a large proportion of the cases of cancer we meet with in that region result from a damaged cervix." In the Annual of

[1]Sc. and Art of Obstetrics, 2d edit. p. 70.

[2]Erosions of the Cervix Uteri. Bost. Med. and Surg. Jour., March, 1887.

[1]Cincinnati Lancet Clinic, February 15, 1890.

[2]Times and Register, June 21, 1890.

[3]Brit. Med. Jour., April, 1887.

the Universal Medical Sciences for 1891, Spanton "records two cases where a malignant growth had developed from the site of a previously healed specific ulcer of the cervix."

Goodell[1] takes a strong position as to cancer of the cervix being caused by lacerations. After describing the various evils resulting from such traumatisms he says, "Further, I feel very sure that almost every epithelial cancer of the cervix starts from such a constantly chafed and fretted surface. For, in my experience, a cancer of even a movable womb, with a ragged notch on one side of the cervix apparently eaten down to the vaginal junction, is no uncommon event. Also, it is very rarely found in virgins or in sterile women." Again he says, "In the immense majority of cases of cancer of the cervix the disease starts from a laceration of the cervix—it is, therefore, almost always found in women who have borne children."

The opinions quoted in this paper together with my own statements, point, I believe, strongly to the probability of lacerations of the cervix being the predisposing cause of cancer of the uterus. If, therefore, this be true, our duty toward our patients is clearly defined and the only rational treatment of cancer of the cervix is prophylatic. It is not necessary to refer to the literature of the subject to throw light upon the fact that the results obtained in the radical treatment of cervical cancer are far from promising. Nay, it has even become a question in the minds of some of the profession whether we are justified in operating at all upon a uterus the seat of malignant degeneration, as statistics show such a large per cent. of recurrences. At any rate there is no denying the fact that cancer of the uterus dooms, yearly, a vast number of women to an early death. There is a strong tendency at the present day among gynæcologists to deprecate minor surgical operations upon the uterus on the grounds that they are unnecessary, and that the inflammatory conditions so frequently present in the pelvis render such interference dangerous, as being likely to light up an active pelvic or general peritonitis.[2] Although I am fully and sincerely in accord with those who believe in the necessity of excluding all possibility of ovarian or tubal disease prior to any manipulations upon the pelvic organs, yet my clinical experience has taught me that these minor operations do result in benefit in certain selected cases where we have clear and defined indications to guide us. This I believe to be especially true as to lacerations of the cervix, which should, in selected cases, be operated upon to guard against the possibility of cancer.

In considering the prophylactic treatment of cancer of the cervix we must first study the indications which call for surgical interference, and second, the methods of operating. We will classify the indications under two headings. First, those cases in which a laceration causes or is associated with a so-called erosion, and second, cases in which no erosion is present, but where the cervical tear produces subinvolution of the uterus. In the first class of cases we have present just such a condition as is most likely to result in a malignant new formation. In point of fact, the border line between an inveterate erosion and cancer is so illy defined that the microscope even fails to make a diagnosis. My rule in practice is to operate upon all lacerations of the cervix associated with erosion, if treatment fails, in a reasonable length of time, to effect a cure. In the second class of cases we have as the result of the chronic inflammation of the uterus, which is produced by the laceration, the catarrhal and other causes of cancer of the cervix. Therefore I also, under these circumstances, operate upon the traumatism to relieve the condition of subinvolution, which I believe is likely in some instances to degenerate into malignant disease. There is no doubt in my mind of the fact that the vast majority of lacerations of the cervix are physiological, and should be left alone, as they are followed by no evil results, but the point I do wish to emphasize is that, in cases such as I have just noted there is always danger of cancer resulting,and therefore they should be operated upon as a prophylatic measure. To further emphasize the necessity of operating upon a damaged cervix I shall quote from an article of Spanton in the *Brit. Med. Jour.*, April, 1887, in which, after speaking of a report of a case of laceration resulting in cancer, he says: "We have, therefore, in this instance a clear illustration of the possibility of cancerous growth supervening on simple hyperplasia of a damaged cervix, and once begun running a rapid malignant course; and this is the point to which I wish to draw attention. I am quite sure it is one which deserves careful consideration, and should lead us to remedy as speedily as possible every case of lacera-

[1] Lessons in Gynæcology, 1887.

[2] Baldy—Med. News, May 16, 1891.
[3] Noble—Trans. Obs. Soc., Phila., Aug. 1890.

tion or fissure of the cervix which gives rise to symptoms which do not yield to the ordinary local remedies."

Having given the indications which require surgical interference in lacerations of the cervix, I shall state my views as to what operations should be employed. A damaged cervix may be restored by either a trachelorrhaphy or an amputation. It is of the first importance to know which of these operations should be selected in a given case. Trachelorrhaphy should only be resorted to in tears which are not extensive and in cases in which the cervix is not hypertrophied to any great extent. Amputation of the neck of the uterus is indicated in stellar larcerations, in tears which are extensive or associated with loss of tissue and in cases where the cervix is hypertrophied. To attempt to do a trachelorrhaphy when an amputation is indicated would result in no possible good, either in removing existing morbid conditions or as a prophylactic measure against cancer. I have never seen any evil results arising from amputations of the cervix, either immediate or remote. [1] "Alloway, from a study of the influences of cervical amputations on future parturition, finds that it favors impregnation, makes labor more easy, less risk of injury to the cervix, and does not increase the chances of premature labor or abortion." In a case where I amputated the cervix for cancer in a woman in the fifth month of pregnancy, the labor at term was perfectly normal and resulted in no injury to the cervix. This has been my experience in a number of cases in which amputation was resorted to. Trachelorrhaphy clearly has its value and should be the operation selected in cases such as I have indicated, but I desire strongly to urge upon the profession the necessity of amputation when the existing conditions demand it.

The method used by some gynæcologists of taking a wedge-shaped piece out of the anterior and posterior lips and bringing them together, in cases of laceration associated with hypertrophy, I earnestly condemn as being both unscientific and useless. What earthly good can such an operation accomplish which leaves untouched at the site of the tear the cicatricial tissue which is the cause of all the trouble?

In amputating the cervix the technique of the operation is of great importance. The écrascur or galvano cautery should not be used, for after amputating the cervix with either of these instruments a large raw surface results which must heal slowly by granulation. This process of healing necessarily retards recovery and at the same time is liable to cause stenosis of the external os uteri.

The method I adopt in amputating the cervix is as follows: After the introduction of the speculum the anterior lip of the cervix is seized with a Volsella forceps, and with a pair of scissors the laceration is extended down on either side to the vaginal junction. The anterior and post lips are then amputated evenly with the vagina. This leaves a clean, raw surface which is covered over by stitching together the surrounding vaginal mucous membrane with silver wire, leaving the edges open directly over the os uteri and afterwards securing them with cat-gut sutures to the rim of the os. A continuous cat-gut suture is then introduced so that the os uteri is completely encircled at a distance of half an inch from the centre of its opening. This suture brings the flap of vaginal mucous membrane in close apposition with the cervical tissue. After the operation is completed the upper portion of the vagina should be tamponed with antiseptic gauze. This operation is a modification of the one devised by Sims in 1859, which consisted in simply covering the stump of the cervix by bringing together, with sutures, the surrounding vaginal mucous membrane. The objections to this operation as stated by Goodell are "cicatricial closure of the os and in the danger of secondary hæmorrhage, the mucus lid not making compression enough to close the open-mouthed vessels." To meet the first of these objections I follow the plan of Goodell and stitch the edges of mucous membrane which are directly over the os uteri to the border of the opening. The danger of secondary hæmorrhage I meet by the continuous circular suture of cat-gut; this I believe to be original with me. This suture not only lessens the danger of hæmorrhage but it also assists materially in securing union by first intention.

In conclusion I will sum up my views as follows:

1. I believe cancer of the uterus to be local and inflammatory in origin.

2. That lacerations are the cause, in almost every instance, of cancer of the cervix.

3. That the indication for operating upon a damaged cervix is pointed out by the failure of local treatment to effect a cure.

4. That trachelorrhaphy and amputation are the only surgical means to repair a damaged cervix.

[1] Annual Univ. Med. Sc., 1891.

5. That amputation should be resorted to in the majority of cases where an operation is indicated.

6. That the stump resulting from the amputation should be covered over by a flap of vaginal mucous membrane.

338 South 15th Street.

ON THE GREAT IMPORTANCE OF DRY TREATMENT IN CHRONIC OTITIS MEDIA.

BY LAURENCE TURNBULL, M. D.,

PHILADELPHIA.

In a paper which was read before the Virginia State Medical Society in the summer of 1890, the absolute necessity of the antiseptic treatment of this form of disease of the middle ear, was dwelt upon. Not only the agents employed, but above all, giving protection to the diseased cavity, by means of antiseptic gauze and other measures.

The great number of these chronic cases are found to depend upon some constitutional disease, either scrofulous, tuberculous or specific disease. In every instance the fluids employed to remove the diseased secretions, must be sterilized by boiling and should contain a small proportion of bichloride of mercury combined with iodium salt.

But no syringing should be done by the patient, only by the physician, and this chiefly for diagnostic purposes. It is necessary, to treat the cases with success, to find out by means of the speculum and mirror, the condition of the mucus membrane of the cavity and the membrana tympani so as to make the proper applications.

Should there be considerable secretion of pus, etc., the solution of the per oxide of hydrogen, 1 part, sterilized water, 3 parts should be employed. After each cleansing of the parts, and opening the eustachean tubes, the auditory canal is carefully wiped dry with absorbent cotton and the parts covered with finely powdered boracic acid and one-sixth per cent. of pure menthol camphor rubbed up together.

The inflation of the middle ear should always follow the cleansing process (preceded in every case by the patient's cleansing the nose,) and this inflation should be done with antiseptic air, by filtering it through bichloride of mercury cotton, placed in the centre of a bulb, and attached to the nose piece of Politzer's bag.

An adaptation of Politzer's idea in a primitive way has been made by one of my friends. He uses instead of the rubber bulb a moderate sized syringe, connecting with the nozzle a rubber tube. The operation is the same as with Politzer's bag, save that air is forced from the barrel of the syringe instead of from an elastic bag.

TWO CASES OF ACUTE PARENCHYMATOUS GLOSSITIS.

BY RAY W. GREENE, M. D.,

WORCESTER, MASS.

In looking up the literature of this subject I find so few cases reported that these two histories may incite some one else to report equally interesting cases.

On the evening of April 1, 1889, I was called to see a man of about 60 years of age, medium size, then of nervous temperament with previous history of occasional illnesses, but of only one serious sickness, viz., pneumonia some 8 years before. His occupation as Custom House Inspector at Boston had for 2 or 3 years become very arduous and the overwork was very apparent to his family and friends. To meet the demand of business this patient on his own account became a frequent user of hypnotics, which for years he had kept in the house for occasional use. Also from 1 to 2 f℥ of whiskey was taken at bed time for sleep. On the afternoon of the day mentioned, without any unusual exposure, the patient had quite a severe chill, vomited his dinner, felt very weak and his throat began to be sore. At 7 P. M. I found his pulse 120; temperature 103°; the fauces looked slightly congested, but the tonsils were not swollen nevertheless. I made provisional diagnosis of violent onset of tonsillitis, and ordered tincture aconite and tincture quinine during night, and Sedlitz powder in the morning. The following day the temperature and pulse were the same. He had passed a very restless night, although good sized doses of hypnotics had been given. In the afternoon the tonsils were red, but not swollen much, while the tongue was evidently quite enlarged so as to interfere with talking and swallowing. The patient was very nervous. I staid with him part of the night, producing some sleep by the use of morphine injected under the skin. On the third day he presented a most pitiable picture. The tongue was enlarged so as to nearly fill the mouth, and protruded half an

inch between the separated jaws. It was covered with white, thick coat, which later became a dirty brown. The saliva dropped copiously from the corners of the mouth, the submaxillary glands were swollen and hard. The eyes were slightly staring and the face wore an anxious look.

Being unable to articulate or swallow, the patient, by writing, made his wants known. He was very sure that he was going to choke to death, although he was told that there was very little danger of it. At his very urgent request, I remained with him during the night. The symptoms grew worse but the respiration was but little affected, so that tracheotomy was not anticipated, though preparations were made for it. Nutrient enemata were given also in the same way; the medicine consisted of whiskey, quinine, bromide and opium. During this night the disease was at its height. The patient suffered internally from sensations of choking, especially whenever he began to sleep, so that for this reason, he was afraid to sleep. The following day, which was the fourth day of the disease, the temperature was 100°, pulse 92, and the tongue was diminished in size, though the patient was still unable to speak or swallow. There was no sign of any pus formation, as far as we could judge. From this time the local symptoms gradually subsided, so that rectal feeding was necessary for 48 hours only. In a few days the mucus membrane of tongue and mouth was almost entirely free from coating, leaving a very red sensitive surface. For many days there was no taste and no desire for food. The temperature and pulse remained above normal for some time. This attack was followed by a general prostration marked by extreme nervousness, slight mental aberration, insomnia, slow return of appetite, so that more than three months elapsed before he was able to resume any work. Of course this long illness was the result of general exhaustion and cannot be considered a convalescence for glossitis, though undoubtedly the apprehension of choking (which he afterwards said he actually suffered for 36 hours) must have been something of a shock to his already weakened nervous system. The patient since then has developed phthisis and is now well advanced.

While in attendance upon the case just cited, I was called to see a young man of Irish parentage, of good family and personal history. Occupation, a plumber's assistant. He complained of sore throat and much pain in swallowing. On inspection I found the throat generally inflamed. The floor of the mouth on the left the side centering about the location of the sublingual gland was swollen and very tender. Under the chin of same side there was swelling and tenderness.

Poultices ordered for the neck and mouth were given. Thirty-six hours later I was sent for very early in the morning. The tongue was more than twice the normal size. The patient had not slept the previous night for fear of choking. The temperature and pulse normal. The area over the sublingual gland about the same size as before. He is able to swallow liquid fluids with difficulty. Calomel, grs. 10, to be followed in four hours by saline till the bowels move freely. Listerine for mouth spray and poultice continued.

Two days later a small abscess broke in the region of sublingual gland, but not, I think, in the gland. About 2½ oz. of foul pus discharged. The opening was dilated and syringed out daily with a weak solution of chloral for three or four days, when the tongue was nearly normal in size and patient practically well.

ABORTION AT FIVE WEEKS, WITH SUBSEQUENT EXAMINATION OF THE EMBRYO.*

BY T. RIDGWAY PARKER, M. D.

The following case is reported, not on account of the infrequency of abortion at such an early period of gestation, but rather with the hope that a full and detailed account, accompanied with a thorough examination of the embryo, which one is rarely successful in securing, may prove of interest to those devoting their time and attention to a heretofore much neglected subject:

M. S., aged twenty years, married, no children, gives the following history: Menstruation began at the age of thirteen years; she had always been regular in her menses, though at times the flow had been profuse, and accompanied by considerable pain. Her general health is good; there exists no kidney trouble nor specific taint of any kind. She last menstruated on November 6, 1890, duration five days. The discharge being normal in every respect, save that it was accompanied with some abdominal pain. On the arrival of her next period to menstruate, December 4th, there was no flow, nor any symptoms indicative of its approach. The

*Read before the Phila. Co. Med. Soc. June 10, '91.

patient was gratified by this state of affairs, as she believed herself pregnant. Week succeeded week without any appearance of her sickness, and hope continued to grow in her breast.

On the 26th of December I was called to see Mrs. S., whom I found very anxious and alarmed about her condition, as she had passed, she told me, a small clot of blood, and declared she felt as if her sickness was about to return, though it was not at a menstrual period. On questioning her further, I was unable to discover any symptoms of pain, and therefore merely advised her to keep quiet and avoid exercise of an exhaustive nature, as I feared should she fail to heed my words of caution that she might suffer from an abortion, it being my opinion, on examination of the vulva and mammæ, that she was some five weeks pregnant. While, of course, it was impossible to make a positive diagnosis at this early stage of gestation, still from the globular form of the breasts, the prominence of the nipples, and the dimpling at their summits, in addition to the purplish hue of the vagina, I considered such a supposition justifiable. As my patient was a blonde, the areolæ were faint, and could not, therefore, be regarded as of much importance. Nor were there sufficient gastric or nervous symptoms present to warrant me in expressing a more positive opinion.

On the following day I called to see Mrs. S., whom I found suffering great pain, which had come on during the night, and was paroxysmal in character, and referable to the back and hypogastrium. Her distress was of such an aggravated form that it was necessary to afford relief as promptly as possible by giving a hypodermic of sulphate of morphine. I learned on inquiry that during the night she passed several clots of blood, and that the flow had been so free that she was obliged to have frequent recourse to a change of napkins. The pulse, at the time of my morning visit, was quick and weak, and the temperature considerably above the normal. I determined, therefore, to explore the vaginal canal, and at the same time examine digitally as to the condition of the uterus. The cervix was discovered by the finger to be softened and the os slightly patulous, while the body of the uterus was enlarged and tender. Continuing my examination I felt several clots in the posterior fornix of the vagina; these I removed, which, on escaping into the palm of my hand, were found, in part, to consist of coagulated blood, but, in addition, an ovum with its membranes intact. This was placed carefully aside until my patient had been rendered more comfortable.

The treatment was generally symptomatic, consisting of anodynes and antipyretics, which seemed all that was required, as the hæmorrhage was slight, and not likely to increase, but rather diminish, since the uterus had expelled its contents. My attention was now directed to an examination of the product of conception. The ovum, to the naked eye, had the appearance of a pale-yellow vesicle, save where the crimson shaggy villus processes projected from the chorionic membrane. The whole mass measured six-tenths of an inch in diameter, while the length of the villi averaged only one-tenth. At the point where the outer portion of the chorion had been torn off from the ovum (indicating the place of separation of the ovum from the decidua), the membranes were so thin and transparent that the eye could clearly discern through them the diminutive embryo, but one-fifth of an inch in length, surrounded by its amnion, which closely invested it. From its caudal extremity could be seen the allantoic stalk extending out to the periphery of the ovum where it fused with the subzonal membrane. The direction which this vascular outgrowth was observed to take was, first, at right angles to the long axis of the embryo until it passed beyond its inferior extremity, when it made an abrupt turn and changed its course so as to run parallel to longitudinal axis. Two vessels of a crimson color were visible, but they could not be traced to the periphery, though very distinct for more than half the length of the allantoic stalk. That portion of the ovum from which the chorionic layer with its villi had been torn off was directly at the point where the duct of the allantois joined the outer ovular membranes. In other words, the outer layer of the chorion with its villi had been separated from the ovum at what one may reasonably suppose to be the placental site. Hence one is justified in concluding that the villi in this locality were larger and more deeply imbedded in the placental decidua (decidua serotina) than at any other point. Further, that the ovum was lost, not on account of any morbid state of the uterine mucus membrane, but through traumatism, the source being unaccounted for and unknown. The villi appeared perfectly normal, and were of a bright crimson color. As regards their structure and development, there was nothing suggestive of any pathological change having occurred. By means of a keen, delicate instrument it was possible to dissect the membranes entering into the

formation of the chorion, and expose three layers to view.

The external, from which the villi were outgrowths, being the opaque altered vitelline membrane; the middle, thin and transparent, I judged to be the remains of the zona pullucida and false amnion (subzonal membrane), while the third and internal, similar to the middle coat, represented the membranous portion of the allantois. Of these three separable membranes making up the chorion, the external alone was opaque. The ovum was slightly heavier than water, yet did not sink to the bottom of the phial in which it was placed, the villi seeming to buoy it up. Beneath the chorion and enclosed by it was a space filled with some thirty minims of a clear, highly refractive fluid, almost colorless, separating the chorionic walls from that of the amnion.

This fluid was of a neutral reaction. Cutting through the layers of the chorion, the fluid was permitted to escape, but did so very slowly, as there existed delicate bands of fibres extending from the amnion to the chorion. These fibres did not cross each other, but radiated from the diminutive amnion, like the spokes of a wheel. It became necessary to divide these before the embryo with its membranes (amnion) could be liberated. The allantoic attachment was not, however, disturbed, that the relation of the parts might not be disturbed. Having freed the amnion, it became advisable to extend the examination so as to include the embryo and its appendages.

The umbilical vesicle had undergone atrophy, and was apparently quite empty. It inclined toward the abdomen of the embryo, and was scarcely as large as its neighbor. It was pear-shaped, and resembled a balloon that had almost collapsed. No vessels of any kind were visible in or upon its walls, which were corrugated and shrunken.

Proceeding next to a microscopic examination of the embryo by means of low and high power objectives the following structures were studied: The embryo occupied a position at the centre of the ovum, where it remained almost stationary, being held in place partly by the amnion and its chorionic fibres, and partly by the allantois. It was a yellowish-white, opaque, gelatinous mass of matter, soft and friable.

The outer covering consisted of round nucleated embryonic cells closely packed together. The long diameter of the embryo, corresponding to the vertebral axis, was one-fifth of an inch in length, while its transverse diameter was not more than one-fourth as great. No eyes were visible, though diligently sought for, nor was it possible to discover even rudimentary upper or lower extremities. The caudal portion of the embryo was very distinct, and being slightly transparent one could see without difficulty the segments of the notochord and the embryonic vertebral arches in their processes of development through the outer covering. The abdominal walls were still separated, and hence there existed a direct means of communication between the umbilical vesicle and the visceral cavity. The cephalic extremity of the embryo presented nothing peculiar nor characteristic, being simply a rounded mass of matter, similar in appearance to that making up the body walls. The line of demarkation between the head and the trunk was but a constricted portion, which represented the neck. No bronchial arches were made out, nor the presence of any oral cleft. Examination of the deeper structures was rendered impossible by the rapid disintegration of the tissues.

As regards the patient, after a week's rest in bed, necessitated by the nervous prostration incident to the sympathetic disturbance, she regained perfectly her health and strength, and there remained no uterine or other unpleasant sequelæ.

In this report of my examination of a five weeks embryo and its coverings I am well aware that there are statements quite at variance with those recorded by several authors, among whom may be mentioned Hirst, in his *System of Obstetrics*, vol. i., wherein is stated, page 129: "In the human embryo the period during which the umbilical vesicle increases in size ends at about the sixth week; then its rapid diminution commences." Yet, in my specimen, I found the vesicle almost empty, much atrophied, and its walls shrunken at five weeks gestation. Again, as to the number of coats comprising the chorion: by nearly all the authorities it is said to consist of but two—externally, the subzonal membrane; and internally, the allantois—through the disappearance of the vitelline membrane, zona pellucida, and internal lining membrane of the primitive ovum. Yet, when I began the dissection of these chorionic layers, I found it possible to separate *three* distinct membranes as described above. The villi were further noticed to be outgrowths from the external layer, not being imbedded in anyway in the underlying structures. As to

the absence of eye-spots and rudimentary extremities I have no satisfactory explanation to offer. This lack of development may have been due to an insufficient supply of nourishment, or subsequent investigation may prove these structures to appear at a later stage of gestation.

SELECTED FORMULÆ.

ARISTOL.

Richtmann recommends replacing iodoform in all cases by aristol. The latter is non-irritant, and its odor is not disagreeable. Its only drawback is its insolubility in water. It may be prescribed in powder, in ointment or in solution. The following are the formulæ that the author employs:

℞ Aristol.....gramme 1.
Ether.....grammes 10.
S. For external use.

℞ Aristol.
Castor oil, aa.....gramme 1.
Collodion.....grammes 8.
S. To paint the affected parts.

℞ Aristol.....grammes 2.
Vaselin.....grammes 18.
S. To apply on the affected parts.

℞ Aristol.....grammes 3.
Olive oil.....grammes 20.
Lanolin.....grammes 77.
S. To apply on burns.

—*Nouveaux Remédes.*

REMOVAL OF MOTHER-MARKS.

The *Allgemeine Medicinal Central Zeitung* gives the following as very efficacious: Mix one part of tartrate of antimony with four parts of emplastrum saponatum and work into a paste. Apply the mixture over the mark to be removed to the depth of one line (one-twelfth inch), and cover with a strip of gummed paper or court plaster. On the fourth or fifth day suppuration sets in, and in a few days later scarcely a sign of the mark can be seen.—*Amer. Med. Jour.*

ECZEMA OF THE ANUS AND GENITAL ORGANS.

Lustgarten advises the following ointment:

℞ Oleate of cocaine.....gr. xij to xxiv.
Lanolin.....f℥i.
Olive oil.....f℥ij. M.

Apply twice daily, and after each application powder the affected part with an absorbent powder.

FUMIGANT FOR ASTHMA.

℞ Stramonium leaves } of each..... ℥ j.
Green tea }
M. Lobelia inflata.....℥ iij.

Add a saturated solution of potassium nitrate, dry, and preserve in a well-stopped bottle. A teaspoonful suffices for a fumigation.—*La Sem. Med.*

STYRONE IN CHRONIC PURULENT OTITIS MEDIA.

Cheltsoff ascribes great value to styrone in the treatment of middle-ear disease. Very good results were obtained by syringing with the following:

℞ Styrone.....gr. xx.
Alcohol..... f℥j.
M. Sig. One part of the above to 20 parts of water.

FOR ANTHRAX.

Dr. Spohn, in the *Semaine Médicale*, recommends the following application in anthrax:

℞ Chloral. hydrat.....grammes 20.0.
Glycerini
Aq. distill., aa.....grammes 90.0.
M. et Sig. For external use.

Gauze kept constantly wet with this solution, should be applied to the anthrax. Any incision is deemed superfluous.

PURULENT OTITIS MEDIA.

Pentkowski, in the *Duetsche Med. Wochenschrift*, recommends the following treatment for purulent otitis media.

The ear should first be syringed out with a warm solution of sulphate of soda, and after being cleaned again, syringed with the following solution:

℞ Ol. menth. piper.....gramme 0.18.
Solve in alcohol. absolut.....gtt. 75.
Aq. dest.....grammes 100.0.
M. Sig. For external use.

Then a pledget of cotton soaked in the following mixture is inserted into the ear:

℞ Ol. menth. piper.....gtt. j.
Aether. sulph.....gtt. 100.
M.

By daily applications of this kind, Pentkowski claims always to have obtained a complete cure within two weeks. In all other cases, where the patients cannot come for daily treatment, he prescribes a powder composed of boracic acid with 1 per cent. of ol. menth. piper., as an application.

ANTIPYRIN IN BLENORRHAGIA.

Brenisa, in the *Journal de Méd. de Paris*, recommends the use of antipyrin in blenorrhagia, prescribing it in the following formula:

℞

Antipyrini.....grammes 3.0.
Zinci sulphatis.....gramme 0.3.
Aq. rosæ
Aq. lauro-cerasi. aa.....grammes 60.0.

M. Sig. For urethral injection.

ZINC GLUE FOR STIFF SURGICAL DRESSINGS.

Treutler recommends a preparation, first suggested by Unna, for obtaining stiff surgical dressings, such as are applied to fractured or dislocated limbs. It is as follows:

℞

Oxide of zinc.....parts 10.
Gelatin.....parts 30.
Glycerin.....parts 30.
Water.....parts 30.

This is thickly applied and rubbed into the muslin or gauze forming the bandage. A thinner preparation contains 20 parts of gelatin and 40 parts of water, the other ingredients remaining the same.—*Med.-chir. Rundschau.*

CHRONIC RHEUMATISM.

The clothing of the patient must be attended to. It is essential that flannel should be worn next to the skin. The Jäger underclothing is very good. The diet should be nourishing, and, if stimulants are required, a little whisky is, perhaps the best. The internal treatment adopted is very various. I have found the following prescription most useful:

℞

Pot. bicarb.....gr. xv.
Pot. iod.....gr. iij.
Tr. hyoscyam..... ♏ x.
Spt. chlorof..... ♏ v.
Inf. gentian..... f℥ss.

M. S. Ft. haustus, ter in die.

In strong adults, a few drops of vin. colchici is beneficial. I have seen good results from three-grain doses of salicylate of soda three times daily. Gaiacum is useful in some cases.

As the patient progresses, a mixture of the following may be given:

℞

Ferri et ammon. cit.....gr. x.
Pot. iod.....gr. iij.
Pot. bicarb.....gr. xij.
Spt. chlorof..... ♏ v.
Aquæ pimentæ..... f℥j.

M. S. Ter in die.

The syrup ferri iodidi answers well in some cases. If there be much pain, opiates, especially given subcutaneously are often of marvelous efficacy. If the patient is debilitated, cod-liver oil is useful.—STAPLE, *Hospital Gazette.*

HOW TO GIVE CASTOR OIL.

The *Dixie Doctor* says to administer castor oil pleasantly, thoroughly mix the dose with four times as much hot milk, shaking the two together in a bottle which they do not more than half fill. When taken in this way the activity of the oil seems to be increased, and being rendered very limpid by the hot milk its oily nature is not perceived. It is scarcely to be distinguished from hot milk.

GLUCOSE TO COVER THE TASTE OF IODINE.

The administration of iodine uncombined is usually objectionable to the patient, yet in many chronic disorders it is preferred by some practitioners to any of its saline combinations. Its difficult solubility in water alone is a hindrance to giving it in this condition, owing to the quantity of a simple aqueous solution necessary for a dose. Sugar not in its ordinary condition is unsatisfactory as an admixture, but it is found that glucose can be utilized much more acceptably. Dr. F. P. Mann, of San Francisco, suggests the following formula, and prefers that the form of glucose should be that of molasses, and that the mixture should be made for at least one day before it is administered:

℞

Iodinii.....f℥ss.
Potass iodidi.....℥ijss.
Aquæ pura.....f℥iv.
Syrup fuscus.....f℥xij.
Ess. gaulth.....f℥ij.

M. ft. sol. sig. Take teaspoonful between each meal, with a little water.

—*Phar. Rec.*

THE

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The Editor will be pleased to get medical news, but it is important that brevity and actual interest shall characterize communications intended for publication.

LEADING ARTICLE.

THE ANÆSTHETIC PROBLEM:— ETHER VS. CHLOROFORM?

The controversy as to the relative merits of ether and chloroform as anæsthetic agents is being carried on vigorously abroad, and it is next to impossible to pick up a foreign medical journal without finding some allusion to the subject under consideration. One of the most valuable papers on this topic recently published, is by Dr. Julliard, a leading surgeon of Geneva, which appeared in the *Revue. Médicale de la Suisse, Romande* February, 1891, and is made the subject of an editorial in the London *Lancet* for April 25, 1891. In this paper Professor Julliard describes how he was first led to investigate the merits of the two anæsthetics; owing to the death of one of his patients by chloroform during the reduction of a dislocation; and in 1877, he began to employ ether. Since that time he has had no accident in 3,654 cases of operation.

He points out in this brochure the fact that both drugs will destroy life if pushed beyond a definite point, and he discriminates between their normal physiological result and the accidental effects they occasionally produce. Both agents may, he asserts, produce primary or secondary arrest of respiration, with this difference, that the arrest of respiration by chloroform is nearly always sudden, while that occasioned by ether is, as a rule, gradual. He also mentions the fact that the cessation of respiration from chloroform narcosis is more liable to be permanent, and artificial respiration of less use in the attempts made to restore the normal functions of the respiratory mechanism, than is the case in narcosis resulting from the use of ether.

Regarding the influence of chloroform on the heart, Dr. Julliard notes the difference between the primary syncope occurring during the early stages of chloroform inhalations and the secondary syncope which is liable to occur during profound anæsthesia. The syncope of the early stage of chloroform anæsthesia is sudden and dangerous, while the secondary syncope is slower in its onset and

is nearly always preceded by cessation of the respiration.

In etherization, Dr. Julliard is convinced that the tendency to primary syncope is much less frequent than in chloroformization. Death occurs much more frequently with chloroform before the stage of complete anæsthesia than with ether. This statement he supports by statistics, in which he shows that of 243 cases of death by chloroform, more than one-half occurred before anæsthesia ensued, while in 60 cases of death by ether only 4 happened before the operation began.

Dr. Julliard confirms the general opinion expressed by unbiased anæsthetizers that secondary syncope is less common with ether than with chloroform; he likewise concurs with the prevalent opinion, in this country, at least, that the danger from chloroform is mainly the production of heart-failure, while that from ether is largely due to failure of the respiratory apparatus. He also points out the fact that artificial respiration is of more avail in this latter condition, arising from etherization, than it or other efforts made to restore the heart's action when that organ stops in the primary syncope arising from the employment of chloroform.

Dr. Julliard gives as his own experience with ether, covering a period of 14 years, that out of 3,654 administrations he has not had a death, and adds: "Not only have I not had any deaths, but I have had no alarming accident. I have not once had to resort to artificial respiration, neither have I had to interrupt an operation in order to ward off any accident, due to etherization. I cannot say as much for my chloroform administrations." This statement is certainly a glowing tribute to the safety of ether, by one who was formerly a strong advocate of the use of chloroform.

In a valuable statistical summary, gathered from various sources, Dr. Julliard is enabled to prove the comparitive safety of ether over chloroform: In 524,507 cases of chloroform anæsthesia there were 161 deaths, or 1 in 3,258; while in 314,738 cases of etherization, only 21 deaths occurred, or 1 in 14,987. A mortality from chloroform four times greater than from ether.

Dr. Julliard sums up his arguments by stating:

1. That anyone who is anæsthetized by chloroform or by ether, in a measure, jeopardizes his life; and

2. That the danger involved is five times less with ether than with chloroform.

In reference to the asserted dangers and disadvantages of ether, Dr. Julliard considered no less than eighteen objections to the drug. We reproduce here a few of the points he considers with his comments made thereon:

1. Ether is disagreeable. This is a matter of taste and is hardly worthy of consideration, in view of the risk.

2. Ether is less active than chloroform, and the anæsthetic effect is more slowly produced. This Dr. Julliard admits, but considers that the delay is amply compensated by the additional safety of the drug.

3. Vomiting is more common after ether. This he proves to be untrue, according to statistics and his own experience.

4. Ether excites bronchial secretion. Dr. Julliard states this is a rare occurrence and that such a tendency of the drug is much diminished by the subcutaneous injection of morphine and by administering a well-diluted vapor of the anæsthetic, etc.

We have quoted somewhat freely from the paper of Dr. Julliard for several reasons:

1. Because of the continued dispute, abroad and even in our own country, as to the relative anæsthetic value of the two drugs —ether and chloroform.

2. Because Dr. Julliard, who is a surgeon of note and a former advocate of the supremacy of chloroform as an anæsthetic, has by reason of a thorough trial of ether reached the conclusion that it is not only the more satisfactory anæsthetic but is also the safer agent of the two.

In conclusion, we would refer briefly to a practical point of some considerable importance, which is alluded to in Dr. Julliard's paper, to wit: the use of morphine previous

to etherization, for the purpose of favorably modifying the action of the anæsthetic. Morphine, to be used in this manner must be given hypodermically in the dose of one-sixth to one-third of a grain, to an adult, at least *forty minutes* before beginning the administration of ether; otherwise, if the operation is to be commenced immediately, according to an extensive series of observations made by Wm. Rigaud and Sarazin, at the hospital of Strasburg, an injection of morphine will augment the period of excitement, and if the dose be tolerably large, accidents on the part of the respiratory mechanism may occur.

The administration of an opiate, in the manner directed, is claimed to act happily in reducing the stage of excitement and the tendency to vomiting; it is also said to promote the subsequent rest of the patient by inducing sleep and to lessen by one-half to one-third the amount of the agent employed to induce anæsthesia.

This plan of modifying the anæsthetic process by hypodermic injections, was first practised by the eminent Munich surgeon, Nussbaum, who published the results of his experiments in the *Bavarian Medical Intelligencer*, for October, 1863.

We are aware that a difference of opinion exists as to the beneficial effect of opium used in combination with either of the anæsthetics named. Most of objectors to the practice of mixed anæsthesia, admit that the employment of morphine and chloroform is open to less objection than the same use of morphine and ether.

The objection urged ugainst the use of a narcotic in these cases is, that in combination with ether, opium is apt to produce a great tendency towards respiratory failure; and in the case of its administration before resorting to chloroformization, it is liable to provoke undue excitement and emesis.

In our opinion, when an operation is to be a protracted and severe one, an opiate in combination with a moderate dose of atropine, hypodermically, does good and lessens the period of ether excitement as well as the amount of the anæsthetic required.

The atropine acts happily as a reliable cardiac respiratory stimulant.

There is no question in our mind, that whenever morphine is so used, it should be given in combination with atropine. *As a preventive of accident, atropine is undoubtedly far more reliable than as a means of rescue when such has occurred.*

A most valuable essay upon the subject of the anæsthetic process by the hypodermic injection of narcotics is to be found in the article of Dr. J. C. Reeve, of Dayton, Ohio, published in the *American Journal of the Medical Sciences*, April, 1876, p. 374.

CORRESPONDENCE.

A PROTEST AGAINST THERAPEUTIC PSEUDO-SCIENCE.

To the Editor Medical & Surgical Reporter:—

A certain famous Talmudist, Maimonides by name, was justly esteemed wise as a physicion as well, if for no other reason than that he enunciated and followed this rule of procedure for each case entrusted to his care. On the first visit he confined his attentions to thorough examination; on his second he administered simple remedies such as are found in ordinary households, regulating meanwhile the environment; on his third he was prepared to give drugs if indicated. It goes without saying that under such circumstances these last came in for little enough use to satisfy almost the therapeutic nihilist. Limitless lessons might be drawn from the dictum of this wise yet little known philosopher and it is to be hoped that his rule of action will obtain the consideration, through the widely influential pages of this journal, which it richly deserves. I have but a word to say concerning the middle proportion and wish to point out how large a field of usefulness might be covered by a critical scientific search into those curative agencies called domestic remedies; also to note the value of relentlessly pursuing our grossly exuberant advanced therapeutics.

It is quite the fashion nowadays among eminently conservative medical men to shout and sing pæans on the appearance of a new compound which its enthusiastic supporters have hastily percolated through the various "systems" of patient beasts in Physiological Laboratories or yet more un-

resisting culture media. Add to this further dilution through the tissues of unsuspecting and perhaps emotionally benefited dispensary patients. Thereupon, these judicious observers, backed up by a great array of observations, confidently raise the banner of the new wonder worker.

The medical press discriminating gravely against fanciful assumptions, is reluctantly induced to publish all this. Editorials are written in a style strangely like the articles from the laboratory and hospital, gravely asserting that wondrous truths are thus, and now under Providence, made known.

Meanwhile a modicum of reward in the shape of public notice is shed like dew upon these observers. This may not be always covert self-laudation nor advertisement, certainly. It is love of scientific knowledge in the main, though seeming oftimes otherwise.

Such researches moreover have proved not seldom to be rounds in the ladder of fame to many bright medical lights. Assuredly much of incalculable value is thus set forth but here and there the impostor gains credence from his worthy company and because his walk and conversation, being entirely in the mode, so closely resemble the true student.

All praises to the self-forgetful toilers who, from pure impulses, searching out the dark mysteries of nature and disease have, in season and out of season, added to the sum of medical knowledge.

The great Trousseau said long ago, when Empirical Therapeutics, then emerging from the fogs of undigested prejudices, began to accept the explanations of experimenters, "distrust medical theories that originate in the laboratory. Although chemistry may be the handmaid of medicine she goes beyond her sphere when she applies the conclusions of the laboratory directly to the treatment of the sick. Chemistry stands little nearer to medicine, because she teaches us how to prepare or to analyze medicines than she does to the art of painting because she prepares the painters' colors."

This is as true to-day as then—both as to the chemical and physiological laboratory.

Too much honor cannot be given to the myriads of unrewarded students who have placed medical knowledge on its present pinnacle of public confidence. The human race is their hereditary and perpetual debtor for what they have done and are constantly doing. Too much confidence can be and is all the while being shown to the impostors, conscious or unconscious, who pose as scientific searchers and teachers.

It is the plain duty of medical men, particularly the great body of conscientious general practitioners looking with reverence upon the great teachers, to cry aloud and denounce those who by accident or design distort the waves of thought in the smallest particular.

There is but one quality which fitly adorns and conditions science, and that is accuracy. This involves unbending honesty of purpose in the arrangement of facts and the record of observations from whence, through much purification, comes the perfect truth.

Judged by this severe standard a very large part of recent medical literature would be found wanting. Whole volumes even now lie neglected on library shelves not yet written a score of years. These are not valueless, perhaps; at least they may serve as landmarks of progress, but they are exceedingly cumbersome and clog the student's movements overmuch.

My object here is merely to sound the note of revision and reconsideration. To begin pretty far back moreover, and not lose sight of the too much neglected old-fashioned remedies—remedies the utility of which was fairly established by wholesome minded enquiring empiricism—that process of practical evolution to which good and safe medical practitioners owe so much, but being no longer fashionable is now sneeringly ignored. And again to point the sceptical finger at the hastily constructed masses of pseudo-scientific facts which, since they are the fashion, pass current for reputable data.

To be sure it may be answered that this process of selection goes on unconsciously and steadily; that human thought works out its own problems in time unassisted. Not so. Elimination and intelligent selection cannot be dispensed with.

Guiding hands exercising the quality of judgment will be needed among all peoples and nations "till Shiloh come."

Thoreau in his clean hearted contempt for conventional restraints somewhat sweepingly but with much force says, that the true vocation of the scholar is "to unlearn the first ideas of history, of science, of social institutions, to unlearn even our own life and purpose; to unlearn the old mode of thought and way of arriving at things; to take off peel after peel, and so get by degrees slowly towards the truth."

If this discriminating power be not ever needful, upon the failure of what selective influence can we place the blame for such a

wretched fiasco as the Koch's lymph episode?

Here a nation enjoying the reputation for greatest gravity and refinement of knowledge upon the occasion of a great international festivity and opportunity for self-glorification, looks about for a hero or a victim. They seize upon a student in his laboratory, who has modestly announced himself on the verge of a great discovery and with ruthless hands drag him protesting to disgorge his grand idea in undigested shape for their gratification; literally "butchered to make a Dutchman's Holiday." They bandy his pearl of possible wisdom about in filthy hands subjecting it to worse than destruction and finally, when unable to use it, hurl it back with curses in his face.

Why also is a large part of the so-called intelligent community yet fondly hoping, yea, fully expecting, marvellous curative results to come from the shrewdly handled mysticisms of homœopathy?

No reasonable doubt can linger in the mind of an intelligent man who may give these facts his attention but that more discredit comes upon the art of medicine from the barnacles of garbled, distorted, ill-digested and putrefying masses of falsely scientific fact and belief than from a too conservative or narrow minded neglect of the wondrous truths constantly opened up to us.

That these matters right themselves if let alone is no more true than that the body rights its functions unassisted.

This self-regulation of the bodily organs does frequently occur but more often demands judicious aid.

The man who keeps ever a watchful critical eye open to point out and correct the diseased tendencies of medical thought will do almost as much for truth as he who makes new and pyrotechnic discoveries.

And finally, is it not the plain duty of all conscientious medical men to stand ready to pull down or denounce false beliefs ever and always?

J. Madison Taylor.

A CORRECTION.

We are in receipt of a letter from Dr. Edward Vanderpoel, of New Suffolk, N. Y., relating to a typographical error in his letter to us, which appeared in the Reporter for August 8. The doctor says:

"In the prescription I gave, the mistake has been made of stating that it was for *five* pills, instead of for *one*. The corrected formula should read as follows:

℞ Chlor. hydrarg. mit.....gr. ij.
Ex. hyoscyan.....gr. jss.
Podophyllini.....gr. ⅙.
M. For *one* pill.
Signa. One pill to be taken every two hours until relieved."

Book Reviews.

SEXUAL NEURASTHENIA—ITS HYGIENE, CAUSES, SYMPTOMS AND TREATMENT, WITH A CHAPTER ON DIET FOR THE NERVOUS. By George M. Beard, A. M., M. D., Formerly Lecturer on Nervous Diseases in the Univ. of the City of New York, etc. Edited by A. D. Rockwell, A. M., M. D., Prof. of Electro-Therapeutics in the N. Y. Post-Graduate Medical School and Hospital, etc. Third Edition, with Formulæs, 8 vo. pp. 282. New York; E. B. Treat & Co., 1891.

This work is one of a series, by the late Dr. Beard, upon the various manifestations of neurasthenia. Those who have not made themselves familiar with the relation existing between sexual disorders and neurasthenia will find the book both instructive and interesting. Discussing sexual topics, the author enlarges sufficiently for the information of the reader, without relating details which appeal only to a prurient and unwholesome curiosity. The style of the book is the reverse of concise, and it contains much matter which relates to neurasthenia in its general rather than in its sexual aspect. In a future edition the Editor might condense it very considerably with advantage.

The chapters discussing the relation of neurasthenia to insanity, the similarity in the symptoms of sexual neurasthenia in the two sexes, the relation, or rather in general the absence of relation between masturbation and genital disease and neurasthenia, are all interesting.

The author is a strong believer in treatment directed to the mind of the patient in combating his disorder, and in this regard all men of experience must agree with him. To remove illusions and despondency, and to supply the basis of hope, and healthy mental activity is undoubtedly almost the *sine qua non* in the successful management of the disease.

A judicious use of roborants, local and general sedatives, and electricity, is also insisted upon. A highly nutritious meat diet

is advised. The author's remarks on travel as a cure are of great interest. One needs a good constitution to travel with pleasure or with profit; and persons who are very sick are usually made worse. Especially the man of limited income, who can ill afford to lose time from business, and still less to incur the extraordinary expenses incident to travel, is seldom benefited. The mental anxieties brought about by travel and expense counterbalance the good received.

PERISCOPE.

THERAPEUTICS.

BROMIDE OF ETHYL IN EPILEPSY.

Dr. J. Donath, of Budapest, reports that when using bromide of ethyl in 0.1 gramme to 0.3 gramme doses, two or three times daily, in cases of epilepsy, the attacks become much milder and of shorter duration, indeed in some cases the improvement goes so far that the epileption attacks give way to mere muscular contractions without loss of consciousness. When exhibited internally, the drug is best given in suspension, as follows:

℞ Aethylein bromati..... grammes 5.0.
Ad. emuls. oleos..... grammes 100.0.
Ol. menth. piper..... gtt. ij.

M. Of this emulsion an adult should be given 30 drops two or three times a day, in a third of a tumblerful of water. This dose should be gradually increased to 70 drops (halfa teaspoonful). Children of ten years of age should begin the treatment with doses of 10 or 20 drops.

Another formulæ is the following:

℞ Aethyleni bromati.....
Spirit. vini. rectificati..... aa. grammes 5.0.
Ol. menth. piper..... gtt. ij.

M. et Signa: 5 to 15 drops in a third of a glassful of milk two or three times daily.

Finally the drug may be advantageously administered in gelatin capsules, the following formulæ being used:

℞ Aethyleni bromati..... gtt. iij.
Ol. amygdal. dulc..... gtt. ij.
D. t. d. in caps. gelat. nos. 100

Signa: 2 to 4 capsules two or three times a day.

If there is an increase of the epileptiform attacks subcutaneous injections of the drug, best given in oily solution, are recommended.—*Münchener Med. Wochenschrift*, July 21, 1891.

THE ANALGESIC ACTION OF ANTIPYRETICS.

Dr. Bernheim, in the *Journal des Sciences Médicales de Lille*, draws attention to the analgesic action of various well-known antipyretics, including quinine, salicylic acid, antipyrin, antifebrin, phenacetin, etc.

When the beneficial effects of salicylic acid in articular rheumatism were first noted, the profession was prone to regard the remedy as a specific in this disease. Experience has, however, taught us that other antithermics as well, possess the same properties, that is to say, that they speedily relieve the articular pain, but without influencing the course of the disease, or exerting any true curative action. The connection between this antipyretic and analgesic action Bernheim essays to explain as follows: Fever occurs by the absorption of pyrogenous substances in the blood, or by the direct influence of the caloric center. Were our antithermics really capable of destroying these ferments in the blood, they would all exert an abortive action upon fevers. This is, however, not the case; indeed Bernheim even refuses to admit a specific action of quinine in malaria, but explains the checking of the morbid process, as a consequence of the absence of fever brought about by the drug's action, and asserts that the same end could be obtained by any other efficient antipyretic. He concludes, therefore, that the various antipyretic remedies, including quinine and salicylic acid, act only as such, in that they effect a cerebral center as antithermics, and that, on the contrary, their "antipyretic" action within the organism is not proved. Their analgesic action is very closely allied to their antithermic action. The former being caused by an action on the nervous centers. In fact, Bernheim has been able, by means of the æsthesiometer, to demonstrate a decreased sensibility of the skin, after the exhibition of quinine. Antipyretics, according to Bernheim, are only indicated in febrile diseases, when the height of the temperature is a menace to life, or when the lessening of an abnormally increased sensibility to pain is desired.

THYMOLO-ACETIC MERCURY IN THE TREATMENT OF SYPHILIS.

Dr. Migneco, in a recent number of the *Riforma Medica*, reports the results obtained in the Catania Clinic for Specific Diseases, with thymolo-acetic mercury (hydrargyrum thymolo-aceticum) in the treatment of syphilis. The remedy was administered by injection in the gluteal region, each time 75 milligrammes of the preparation as follows was injected:

℞

Hydrarg. thymolo-acet..... grammes 1.50.
Mucilag. gum. arab..... grammes 0.50.
Aquæ. dest..... grammes 20.0.

M.

In the eighteen reported cases, 250 injections were made. The average duration of the treatment was 33 days. An exact examination of the urine revealed the fact that mercury could be found in moderate quantities eight hours after an injection had been made. No local reaction was occasioned by the treatment. In comparison with bichloride of mercury it is far superior, although it is insoluble. Its action is much more prompt, and relapses apparently occur less frequently.

THE EMPLOYMENT OF EXALGINE IN INFANTILE THERAPEUTICS.

Dr. Moncorvo, in the *Bull. Thér.*, writes that his researches have been carried out on a total of twenty-one children from the age of one and a half years to twelve. In all these cases the exalgine was given to combat the element of pain, and he was obliged to confess that it much exceeded his expectations. In fact, in not a single case was he disappointed in its effects, and in every instance tolerance was perfect. There was no dizziness, ringing of the ears, or other unpleasants effects observed. Ordinarily the action of the drug was easily obtained, amelioration of the pain being generally established in an hour after the administration of the drug, not rarely it was quite abolished by that time.

He has often given the remedy many days in succession without the least sign of intolerance. In this way he has, in some of his patients, cured definitely, neuralgias and migraines which had dated from a long time back, and which resisted all other therapeutic agents.

The cases treated were as follows:

Neuralgia	2 cases.
Migraine	4 "
Otalgia	1 "
Odontalgia	2 "
Gastralgia	2 "
Hepatalgia	1 "
Pleurodynia	1 "
Dry Pleurisy	1 "
Articular Pain	2 "
Otitis	2 "
Torticollis	1 "
Pott's Disease	1 "
Lymphangitis and Arthritis	1 "
Total	21 cases.

In all his cases exalgine has, without exception, succeeded; that is to say, it always acted as an analgesic.

An apparently small dose of the drug will frequently triumph over the most tenacious pain, its analgesic power being very far from being in proportion to the size of the dose. From this point of view it appears to him to have a decided superiority to antipyrin, at least as regards children.

Great energy with the most complete innocuousness in moderate doses are the two points which recommend the use of this new agent in infantile therapeutics. It was usually given in solution with an agreeable tincture or essence containing a little alcohol. In the older cases it was sometimes given in wafer paper or capsules, and sometimes the dose was placed on the base of the tongue and washed down with a swallow of wine and water.

In regard to posology: Being somewhat timid with his first cases he began with 5 cgm. (¾ gr.) a day, but soon finding the tolerance absolute, he progressively augmented the dose up to 30 cgm. (4½ grs.) in the 24 hours, and this last dose has been as well supported as that of 5 cgm.

Considering the claims of exalgine as a nervine he mentions a case, previously published in THE REPORTER, of chorea in a child eight years old, with very nervous antecedents. The chorea was very marked and the movements did not cease even during sleep. The dynamometric force was eight kilos for the right and six kilos for the left hand. Treatment consisted of 10 cgm. (1½ grs.) of exalgine twice daily with the result of the complete disappearance of the choreiform movements and great general improvement.

The following are the conclusions reached:

1. The great activity of exalgine as an analgesic has been, without exception, well demonstrated in these twenty-one diverse cases of pain.

2. In children complete tolerance has been established, and in no case was there any appearance of disagreeable results.

3. The initial dose should be five cgm. (¾ gr.) a day and rise progressively to 30 cgm. (4½ grs.) a day.

4. The drug may be given in any acceptable way—solution, capsule, or placed on the base of the tongue and washed down by a swallow of wine and water.

5. Exalgine surpasses antipyrin in activity, even in cases where the dose of the latter is five times as great.

6. The value of the drug as a nervine seems probable from the results obtained in one case of chorea.

SEA-SALT FOR INSECT BITES.

According to the *Deutsche Med. Wochenschrift*, sea-salt is an excellent application for the sting of bees, wasps, and other insects. The parts stung are rubbed with the salt dissolved in water. Pain and swelling disappear immediately, or, if the treatment is used at once, do not appear at all.

MEGHANICAL TREATMENT OF THE STOMACH.

Dr. Cseri (*Pest. Med. Chir.*) claims to have achieved the most brilliant results in the treatment of chronic digestive disorders by the employment of massage of the stomach, supplemented by regulation of diet.

The massage is practised while the stomach is full, *i. e.*, two or three hours after the chief meal. It consists in, for 10 or 15 minutes, rubbing and kneading the stomach, from the fundus toward the pylorus, at first gently, but afterward more forcibly. During the operation the patient lies on his back, having his kees drawn up, and breathing with his mouth open. After the stomach has been thoroughly kneaded, the massage is extended over the intestines.

The manipulation is not at all painful; it rather produces a feeling of warmth and comfort in the stomach. After several sittings, the feeling of depression and gastric oppression, common in dyspepsia, disappears.

Being practised two or three hours after meals, that is at a time when part of the ingesta are entering the duodenum, the massage assists the progress of the gastric contents, and also relieves the stomach somewhat of the gases which are present in it about this time. It tends, furthermore, to restore the impaired gastric peristalsis.

Cseri claims that massage widens the pylorus, so that it no longer resists the passage of the food, thus relieving the troublesome pains so common in nervous dyspepsia. But massage is useful in dilatation of the stomach, as well as in nervous dyspepsia.

Of course, ulcers and new growths of the stomach are a positive contraindication to the massage treatment.—*West. Med. Rev.*

TREATMENT OF TOXIC AMBLYOPIA.

The following summary of treatment of various toxic amblyopias is given by Chaltin (*L'Union Médicale*, May 2, 1891):

1. *Alcoholic Amblyopia.*—Immediate abstinence from alcoholic drink. Improve nutrition by tonics and diet, with bromides for cerebral excitation. Locally, instillations of pilocarpine. To increase nerve tone, strychnia hypodermically, electricity, hydrotherapy and ocular douches.

2. *Tobacco Amblyopia.*—Moderate use of tobacco; cigars to be smoked only two-thirds. If well-marked symptoms exist, withdraw tobacco altogether. Stimulate nutition. Inhalations of nitrite of amyl; subcutaneous injections of strychnia; continued currents; ocular douches.

3. *Saturnine Amblyopia.*—Treatment of lead poisoning; sulphur baths, iodide of potassium, purgatives, tonic regimen.

4. *Quinine Amblyopia.*—Purgatives and diuretics, inhalations of nitrite of amyl, injections of strychnia, and electricity.

5. *Antipyrin Amblyopia.*—Withdrawal of the drug has proved sufficient.

6. *Sulphide of Carbon Amblyopia.*—Abandonment of profession. Tonics, iron, quinine, strychnia subcutaneously, inhalations of nitrite of amyl, and electricity.—*Union Med. Mag.*

TURPENTINE AS A GERMICIDE AND ANTISEPTIC.

Although the oil of turpentine (*Oleum Terebinthinæ*, U. S. P.) is not unknown as an antiseptic and germicide, its insolubility in water and its irritating properties have hitherto made its use impracticable. That it has its special uses, however, in this connection, I have had abundant testimony. It is a well-known fact among naturalists that if the air of a cabinet be impregnated with the vapor of turpentine, the specimens are safe from the ravages of moths and other intruders, so long as this condition of the air of the cabinet remains. Having learned the advantage of turpentine in preserving entomological specimens, I concluded to try its germicidal properties in the cases containing surgical instruments. A bacteriological examination of the cases, made four weeks afterward and compared with the examination of cases not provided with turpentine, convinced me of its efficacy, and I soon afterward applied the same principle to drawers containing towels, gauze, bandages, etc. The method is simple. The turpentine is placed in flat large-mouthed bottles at the bottom of each case or drawer, the volatility of the turpentine causing the vapor to impregnate the surrounding air. Of late I have also placed my surgical instruments, the night preceding an operation, in a flat dish containing oil of turpentine. The instruments are completely sterilized, are not injured by

the submersion, and are easily dried by a piece of sterilized gauze or towel. The characteristic odor of turpentine can be removed by ether. The cheapness of turpentine and the ease with which it may always be obtained, added to its special adaptability in preserving the aseptic condition of instruments, bandages, etc., by its vapor, may make it a valuable addition to the list of our antiseptics and germicides. I have also used benzole in the above manner. Its greater volatility gives it a more rapid germicidal action than turpentine, but its great inflammability admonishes caution in its use.—*Medical News.*

THE TREATMENT OF ANTHRAX.

Prof. Kosturin and Dr. Krainski publish in the *Vrach*, in the form of a preliminary note, an account of some experiments they have made on the treatment of Siberian sore or malignant anthrax by means of the toxines of putrefying fluids. They had previously published somewhat similar researches on the effect of certain toxines on tuberculosis, and felt sufficiently encouraged by their results to proceed with the experiments on anthrax. Most of these were carried out on rabbits. The anthrax virus was obtained from a professor of the veterinary institute in the form of a mother culture, from which fresh cultures were obtained as required by sowings on meat-peptone agar, and mixture with sterilized broth, until the latter became quite turbid. About half a cubic centimetre of this injected under a rabbit's skin always caused the animal's death in from thirty-five to fifty-five hours. The substance used as an antagonist to this virus was the extract or broth of fresh meat, allowed to putrefy at a temperature of 16° C. for from fifteen to forty-five days without the free access of air. This putrefying broth when injected under the skin of a healthy rabbit in the proportion of 1–850th of the animal's weight produced a marked rise of temperature, 40.8° C. being the maximum, which lasted for about two days, after which the normal condition was regained. The general result of the experiment was that the injection of putrefying broth five or six hours after the introduction of anthrax virus in all cases retarded death, and in some, especially where the dose of virus had been a small one, and when that of the remedy was repeated two or three times at intervals of a few hours, entirely prevented a fatal result, the animals recovering completely. Two experiments were made with sheep, 0.2 cc. of the culture of the anthrax virus being introduced into each and also into two rabbits for purposes of comparison. Three hours afterwards sheep No. 1 was given 0.5 grm. putrefying infusion of meat a fortnight old, and sheep No. 2 a similar quantity of broth a fortnight old. Rabbit No. 1 was not treated; rabbit No. 2 was given 0.1 grm. of the broth. The results were as follows: rabbit No. 1 died in 60 hours, rabbit No. 2 in 136 hours, and sheep No. 1 in 100 hours, and sheep No. 2 in 66 hours. The necropsy of all the animals showed that they had died from anthrax. The unsatisfactory result here is ascribed by the authors to the very small quantity of putrefying broth injected. In the case of rabbit No. 2 the good effects of the treatment are apparent, but as it was kept in the same hutch as No. 1 it is very probable that it became reinfected. From this and some other experiments it was evident that animals undergoing treatment must be kept in separate cages. It is a pity that further experiments were not made with sheep; still, enough has been done to indicate a possibility of success, especially as the remedy does not appear to be of itself a very serious source of danger. Some attempts were made to test the effects of pure cultures of sarcinæ and of putrefactive bacteria, but entirely negative results were obtained; consequently the authors think that the antagonistic effects of putrefying broth or infusion of meat to anthrax, and perhaps other infectious diseases, do not depend on the bacteria contained in them, but rather in toxins or chemical products of putrefaction. Another important observation was made—viz., that when the putrefaction was allowed to go on with free access of air, the product had little or no power of arresting the progress of anthrax. In order to show the antagonism of putrefaction extracts to anthrax, cultures of the latter were mixed with putrefying broth, and though the anthrax still continued to multiply just as it ordinarily does, injections of this culture were found to be innocuous. The authors are now engaged in testing the effect of putrefaction toxines on the diphtheritic process, and a further paper on the subject may be looked for.—*Lancet.*

MEDICINE.

THE CAUSE OF ANÆMIC HEART-MURMURS.

Anæmic heart-murmurs have been the subject of various ingenious explanations.

The one given by the best text-books for a long time was a morbid condition of the blood, an explanation good as far as it went, but one that did not go very far. Recent investigations make it probable that these murmurs are due to a weakness of the papillary muscles of the heart, by which the curtains of the mitral and tricuspid valves are relaxed and so give rise to an adventitious sound. Experiments show that when in the death of an animal the heart gradually fails, the contraction of the papillary muscles lags more and more behind that of the ventricular wall, and ceases entirely some time before the rest of the heart stops beating. On account of their situation the papillary muscles are the part of the heart wall likely first to feel the effects of a decreased blood supply in anæmia; corroborative evidence of this theory is found in the fact that in acute anæmia and other conditions of sudden and great weakness, a heart-murmur is often to be detected, which disappears, upon compression of the iliac vessels or abdominal aorta, or upon the administration of alcohol or digitalis to strengthen the heart beat.—*Northwestern Lancet.*

HIGH BODILY TEMPERATURES.

In the *Memphis Med. Monthly*, June, 1891, Dr. Jones records the case of a bright girl, æt. 14, primarily affected with tonsillitis, in whom the thermometer at different times registered 97°, 99.5°, 103°, 105°, 109, 112°, 115°, 135°, 150°, 158°. Respiration at no time much accelerated—while the hyprexia lasts there is always nausea and a sense of oppression in the chest.

The circulation is never accelerated beyond 10 or 12 beats to the minute, being usually 85. It has not recently been above 100, nor at any time beyond 120. Patient recovered.

In *The Journal of American Medical Association* Dr. W. J. Galbraith relates the case of a married woman æt. 26, in whom the temperature within a short period registered at different times 95.8°, 107°, 112°, 117°, 125°, 137°, 145°, 151° observed by her physician—while the record of the nurse showed it to have reached 171°. The patient was suffering from peritonitis. Recovering.

Dr. Crofford saw a temperature of 108.5° in a case of sun-stroke. Patient recovered.

Dr. Saunders had seen a temperature of 108° in yellow fever—110° in sun-stroke. Both patients died.

Dr. Williams saw a temperature of 111° in the rectum after death from remittent fever.

Dr. Donkin (*British Med. Journal*, 1889) records an instance of 110°, 112.6°. Once the thermometer rose to 107.2° in right axilla. Five minutes later it was only 98.6°.

Mr. J. W. Peale (*Chir. Trans.*, 1875) reports the case of a young lady having suffered from the fracture of several ribs: two months later the thermometer one day registered 110° and afterwards 122°. Ultimately regained fair health.

Dr. Moxon, (*Guy's Hosp. Reports*, 1879) æt. 22, affected with phthisis, in the ward for ten months. Thermometer rose to 107.4° and one hour later 110.8°, suffering from dyspnœa. Next morning it was 99.8°. On one occasion later it rose to 114° in axilla. Died of lung trouble March, 1880. —*Virginia Medical Monthly.*

THE CARE OF THE CHRONIC INSANE.

In viewing the advantages of the Belgian colony of the insane at Gheel, the question arises, Why should the chronic insane of our country be housed and cared for at a *per capita* cost infinitely in excess of what they have been accustomed to all their lives, and whether, with simpler, plainer homes, familiar occupations and larger freedom, this class would not only be happier, but better off in every way, as well as less expense to the State? Why should the legitimate work of a hospital be hampered, as it undoubtedly is, by the vast accumulation of chronic cases whose care involves an immense amount of work that is non professional? Cannot these cases be just as well cared for in asylums built at less expense, or placed in homes whenever feasible, rather than be permitted to encumber the wards and hinder the work of a hospital in which recent cases demand and should have, every care and all the skill science has at its command? Might there not be greater probabilities in the way of recoveries if this were true?

I simply question, for I know how the life of every hospital physician is burdened with petty details, and how difficult it is under such circumstances to attain to the highest professional ability. For many years the plan for the care of the insane which has recommended itself to me has been that of a hospital to which patients should be committed, and from which they should be drafted, after their condition is determined, into simple, plain, inexpensive cottages or homes, such as the State could best furnish, there to

be cared for well and kindly under medical as well as State supervision, but at a minimum cost, as regards their housing, while in the hospital should be kept those who needed the best of skilled medical care and trained attendance. From this hospital, in all cases where such a course would be advisable, transfer should be made to a convalescent home, and so into the world again.

The mammoth asylums, to which year after year wings are added until no man can have an adequate conception of the needs of his patients, and especially no idea of their pathological condition, are a blot on the intelligence of the age.—*Margaret A. Cleaves, M. D., in the "Journal of Mental Science."*

A CASE OF THE ATAXIC FORM OF ALCOHOLIC PERIPHERAL NEURITIS.

Alcoholic Ataxia :—Ataxic gait; inability to stand with eyes shut; loss of knee jerks; girdle pain; recovery.

T. G., 31, clerk, consulted me on the 2d March, 1889, complaining of pains in the calves of his legs, which were worse on walking about. His illness began on February 18th.

Previous History.—He had never had any serious illness or met with a severe accident, though he had twice fallen from his bicycle and cut his face. Denied having had syphilis or any venereal disease. He had had gout, and used to keep a public house. According to his wife and his employer he had been in the habit of "boosing" himself with beer daily. Took no breakfast, but bread and cheese or ham and a pint of ale at 11 o'clock.

Family History.—His father had gout and died of it. His mother was living, aged 62, in indifferent health; 12 or 14 years ago she was insane. He had one brother and one sister alive and in good health.

History of Present Attack.—His wife and his employer concurred in stating that for about a fortnight they had noticed his memory had failed him. He forgot to do what he was told, and yesterday he imagined he had been at work the day before, although he had not been from home for several days. On Sunday, February 17th, he was in his usual bodily health and took a long walk with a friend. On Monday morning he started to walk to his office and found great difficulty in getting there. The distance was about a mile and the snow was on the ground; but he did not get his feet cold or wet. For the last two days he had had a sense of tightness round the waist (girdle pain.) His wife said he had complained to her of seeing double.

Present Condition.—Patient came stumbling into my room, and very nearly fell; he could not stand steadily with his feet together, and fell as soon as he closed his eyes. The knee jerks were entirely gone. The pupil reflexes and ophthalmoscopic appearance were normal. There were no lightning pains; girdle pain already referred to had been present for two days.

His mental condition was not obviously abnormal, but his wife said that he asked her the same question repeatedly, and she was decidedly of opinion that his mind was affected. There does not seem to have been any moral change. There was no muscular wasting or obvious paralysis. No œdema or eruption on skin. Physical signs normal. Bowels regular.

Urine pale, clear, acid, 1010, contained a trace of albumen, no sugar.

He was ordered hypodermic injections of strychnine, and to become a total abstainer. Owing to difficulties, the strychnine was administered by the mouth and the abstinence maintained till lately, when he had been taking against advice, a little claret.

October 31st.—Patient came to see me again. He could walk quite well; stood quite steadily with his eyes shut and feet together; no girdle pain; knee jerks present. His urine still contained a haze of albumen. The pains in the legs were better.

Remarks.—These cases are sufficiently uncommon to make this typical example worth publishing.

The diagnosis was made on two grounds: 1, the very rapid onset, and 2, the history of alcoholism. It is said that the absence of myosis, of the Argyll-Robertson pupil, of arthropathies, and of visceral crisis are of diagnostic value, but all of these are absent in many cases of typical locomotor ataxia (sclerosis of the postero-external columns.) The loss of memory was another point in favor of alcoholic ataxia, but again, it is not very uncommon to have mental symptoms complicating those cases of locomotor ataxia, which later develop into general paralysis. —*Dr. Robert Saundry, in Birmingham Med. Rev.*

NEURITIS DUE TO POISONING BY ARSENIC.

Dr. E. G. Cutler, in the *Boston Medical and Surgical Journal*, reports a case of neuritis due to poisoning by arsenic. The patient was in the habit of placing in his mouth a number of green paper labels—which were proven by analysis to contain

arsenic—in connection with his employment. The earliest symptoms were numbness and pricking of the fingers, with weakness of the right hand. The weakness in a few days extended to the other limbs, and was accompanied by general soreness and cramps in the calf muscles. The grasp was feeble and the gait shuffling; knee-jerks absent, superficial reflexes weakened; no dyspepsia or urinary trouble; bowels rather constipated; no headache or disturbance of vision. The patient recovered under the administration of iodide of potassium, sponging with salt water, and subsequent daily rubbing with ice.—*Practitioner*, May 1891.

CENTRIFUGAL FORCE IN CLINICAL DIAGNOSIS.

In the *Verein für Innere Medizin* in Berlin on 20th April, Dr. Litten gave an account of a method which had been devised for the adaptation to clinical medicine of the uses of centrifugal force, which has hitherto been applied only by physiologists. The usual methods of filtering, and of allowing fluids to settle, have often certain manifest disadvantages, and these are thus overcome. Special reference is made to examination of the urine, and the ease with which tube-casts, tubercular bacilli and other micro-organisms, blood-corpuscles, &c., may by this means be detected. It is applicable, also, to the investigation of fluid from echinococcus cysts and of pleural effusions. The advantages with regard to the latter are thus stated:

"1. Easier demonstration of tubercular bacilli.

"2. Constant demonstration of blood in clear pleuritic effusions.

"3. Avoidance of the coagulation of the exudation.

"The last is especially important; for, as is known, there are some pleuritic exudations which coagulate immediately, so that microscopic examination of them is impossible. If one warms the glass of the centrifugal machine, and allows the fluid to run into it, and sets it at once in motion, the corpuscular elements are obtained before coagulation occurs."—*Deut. Med. Zeitung*, 4th May, 1891.

SURGERY.

EXTIRPATION OF THE LARYNX.
(LARYNGOTOMY.)

Professor Dr. Tauber, of Warschau, has recently collected all the reliable and available histories of extirpations of the larynx. The number collected from all sources is 163 operations; these Tauber has classified as follows: First, regarding the countries in which they were performed.

In Germany	48	times.
" Russia	20	"
" England	19	"
" Austria	17	"
" Italy	17	"
" France	11	"
" America	11	"
" Switzerland	8	"
" Denmark	8	"
" Belgium	3	"
" Spain	1	time.

Second, when tabulating the cases according to the age of the patient operated upon, Tauber obtains the following figures:

Up to 20 years of age	3	cases.
From 20 to 30	9	"
" 30 to 40	15	"
" 40 to 50	40	"
" 50 to 60	50	"
" 60 to 70	13	"
" 70 to 80	8	"

Third, regarding the results of the operation Tauber tabulates these into four groups.

Group 1. Cases in which the fatal issue was directly due to the operative procedure ("absolutely fatal cases")—67, or 41.1 per cent. of the entire number.

Group 2. This group includes what Tauber terms the "absolutely successful cases," and among these he includes all those who had not suffered a relapse three years after the operation—13, or 7.9 per cent. of all operated upon.

Group 3. This group includes such cases, which although recovering from the operation, suffered a relapse and succumbed inside of a year after the operation; these are called "relatively fatal cases" by Tauber—47, or 28.8 per cent.

Group 4. Herein are finally included such cases which, while recovering from the effects of the operation and remaining without relapse for one year, could not be kept under observation for a sufficiently long period to enable them to be placed with group 2; these Tauber calls "relatively successful cases"—32, or 19.6 per cent.

When the first group is added to the third, and the second group added to the fourth, a very positive but also a very discouraging result will be obtained; the fatal cases mount up to 69.9 per cent. and the successful cases only to 27.5 per cent. In other words, under the most favorable circumstances to

the patient, the operation yields at best only 7.9 per cent of permanent recoveries.

In view of these facts, Tauber is of the opinion that the operation may be ranked with those of which that peerless operator, Stromeyer, has said: "Humanity will lose nothing if such operations fall into disuse, and surgery gains no honor by their performance."—*Deutsche Medizinal-Zeitung*, July 20, 1891.

TREATMENT OF CARBUNCLES BY EXTIRPATION.

Every year a number of lives are sacrificed owing to our faulty means of dealing with carbuncles. When these are treated merely with free incisions, the patient is doomed to a long period of confinement, the skin frequently becomes gangrenous to a large extent, and the final result is at best an unsightly scar. In order to avoid all these unpleasant sequellæ Dr. Riedel, of Jena, reports to the *Deutsche Medicinische Wochenschrift*, the value of a complete extirpation. His opinions as to the value of the procedure are based upon an extensive and most successful application of the method. The operation is conducted as follows: A cruciform incision is made across the seat of the carbuncle, and stretching well into the healthy tissue. The four triangular flaps are then dissected back until the healthy tissue is reached, and the indurated portion extirpated. The usually copious hæmorrhage is controlled by compression. A loose tampon of iodoform gauze is then inserted in the wound, the skin having been brought back into position. The following day the iodoform tampon is removed and an ordinary antiseptic dressing applied. The wound will heal rapidly, and the loss of substance from the center will replace itself very quickly.

The advantages of the method are that by the complete removal of all infiltrated tissue, the dangers of subsequent gangrenous or septic poisoning are completely removed; the scar, also, will be slight compared with that obtained by the method of simple free incisions.

NERVE-COMPRESSION DUE TO CALLUS.

In the *Gazette Hebdomadaire de Médicine et de Chirurgie*, March 14, 1891, there is an exhaustive paper on this subject that contains much of interest by the late Dr. Trelat. Nerve abnormities following fractures are numerous. Sometimes the cause of the fracture is also the origin of the nerve injury. Again, a spicula of broken bone may lacerate or run through a nerve, or the nerve substance may be imprisoned by the reduction of the fracture. All these possibilities are excluded in the present consideration of nerve-compression.

The author cites a case illustrating the good effects of surgical interference, in which there was compression of the radial nerve following the reduction of a fracture of the humerus in a child of eight. After perfect union was established, there remained a paralysis and atrophy of the extensors and an intensely painful spot just underneath and in front of the epicondyle. There was an extensive and deforming callus at the seat of the fracture. Liberation of the nerve resulted in complete use and health of the arm, the child later as a youth winning prizes in athletic sports.

A similar paralysis in a man of forty was treated by the knife, with the result of retarding union of the bone and inducing an abscess at the point of incision. Muscular movements were recovered in time. Paralysis in such cases is not immediate, appearing only one, two or three months after the accident, and progressing slowly as different branches of special nerve-trunks are involved. There is rapid muscular atrophy and sometimes altered sensation. Surgery alone has power to relieve this condition, which in itself is sufficiently serious, the nerve-degeneration being rapid and the compression often setting up an ascending neuritis or myelitis.

Pressure on a nerve may come from underneath as well as from imprisonment, the mass of callus raising and stretching the nerve substance or partially inclosing it in a little channel of osteo-fibrous material or of pure bone. The order of compression depends largely upon the locality of the fracture. In case of pressure from underneath, when the nerve is raised up, instead of being smooth, round, brilliant and glistening, the nerve is flattened, grayish, cloudy and often irregular in outline. When imprisoned by osteo-fibrous material, the nerve may retain its natural rotundity, but has a shrunken appearance within the callus, and presents just beyond it a matty ganglionic swelling analogous to nerve-proliferation in the stump of an amputated limb. The nerve in this instance has the general appearance of a little fibrous cord. The histological manifestation is similar to that resulting from division of a nerve, with this exception: all the fibres in the severed ends of a divided nerve undergo simultaneous degeneration. Not so in degeneration due to this osteo-

fibrous compression. One fibre after another is attacked. There is a difference in time, but not in kind, in these processes.

Age is an important factor in the regeneration of nerve-tissue, the best results in surgery like the foregoing being obtained in young subjects. Crushing the callus is insufficient to afford relief. It is imperative to cut down on the nerve, expose it to view, find out the exact cause of compression, and remove it speedily. The difficulty of the operation—Esmarch's bandage should always be used—is chiefly due to changes in anatomical distribution caused by the callus itself. To avoid bewilderment and loss of time, a long incision should be made and the nerve first traced somewhere in its course where its position is normal, instead of beginning to follow it at or too near the callus. If the nerve is simply lodged under a fibrous cover, the bistoury will serve to liberate it. But if true bone imprisons it, a portion must be chiseled away. The callus must then be leveled and made smooth.

In certain instances it may be necessary to suture the periosteal fibres to prevent future implication of the nerve, or to attach the nerve itself to some neighboring muscle. But such necessities have not yet arisen in the author's practice.—*Jour. Nerv. and Ment. Dis.*

TREATMENT OF CHRONIC INFLAMMATION.

To remove the products of inflammation when occurring in orchitis, epididymitis, the lymphatic glands, or the articulations, Dr. Land (*Revue Internationale de Bibliographie* March 25, 1891) recommends the use of hot compresses, stating that this measure has always given him the best results even when other remedies had proved inefficacious. These compresses should be applied frequently for ten or fifteen minutes several times during the day, taking care, however, that during the applications one compress should not be allowed to remain more than two minutes. The compresses should be immersed with water at a temperature from 104° to 140° F. They should not, however, be used during the acute stages of inflammation.—*Ther. Gaz.*

THE DIAGNOSIS OF FOREIGN BODIES IN THE BRONCHI.

To ascertain which bronchus is the seat of a foreign body is not unusally a matter of difficulty, if we avail ourselves of the assistance afforded by auscultation. If the foreign body exactly fills the lumen of the bronchus, this will be indicated by the absence of respiratory sounds on the corresponding side, while, if the obstruction is incomplete, the sounds will be exaggerated and assume a hissing character. The data furnished by auscultation, however valuable they may prove in the case of a solid body, may leave us in the lurch if we have to deal with a hollow body, such as a bead. This is strikingly illustrated by a case recently reported by Dr. Sprengel, in the *Centralblatt für Chirurgie.* The patient, a child five years old, suffered from severe dyspnœa, resulting from lodgment of a foreign body in the throat. Auscultation revealed normal respiratory sounds on the right side, while on the left they were almost imperceptible. A diagnosis of foreign body in the left bronchus was made and tracheotomy performed; but, after the incision had been enlarged, the bead was seen distinctly lying in the trachea, the lumen of which it filled completely. It was turned with forceps and then ejected by coughing. To explain the auscultatory signs, the author assumes that the bead lay in such a position as to prevent the passage of air into the left bronchus, while admitting it to the right through its aperture. This case is an exceedingly valuable contribution to the literature of foreign bodies in the air passages, since it demonstrates that when a hollow body is lodged at the lower end of the trachea, the physical signs may differ essentially from those produced by a solid body, and may lead us to infer that it is situated in a bronchus.—*Internat. Jour. Surg.*

THE ABORTIVE TREATMENT OF SYPHILIS.

The loathsome nature of pox; the great difficulty and uncertainty of thoroughly eradicating the disease from the system, when once firmly established, has made the dream of its early cure a pleasing one. The abortion of gonorrhœa has received a comparatively greater amount of attention, but when we stop to consider the dangers attending the present methods deemed necessary to effect this purpose, the freedom from systematic infection, and the possibility of bringing about a cure within a reasonably short time by safer means, we realize how much more to be desired would be a sure method of stopping short a syphilitic infection. For two hundred years excision of the chancre has been practised, in the hope, at times apparently realized, that in removing the initial

lesion of the disease the system would escape. Strange as it may seem, after these two hundred years, we cannot yet say just what valuation should be placed upon the method. Some observers have claimed good results, while others have seen only failures follow their efforts. At the International Congress in Berlin, Professor Leloir presented a contribution to the subject, which is of interest as coming from one who has had considerable experience in the matter. As early as 1844 he advised excision: 1. If the chancre is just beginning; 2. if the chancre is so situated that an excision can be removed readily and without danger; 3. if the chancre is not already accompanied by enlarged glands; 4. if it is single, or, at least, easily to be removed in its totality; 5. if the individual is entirely free from such diseases as diabetes, albuminuria, etc. These rules for undertaking the excision were given three years after the author had expressed his belief in the inutility of the operation. His subsequent experience has, however, led him to regard the success of abortive effort as a possibility. He relates a case in which a lesion believed by him to be a true chancre was excised in 1884 (the woman from whom it was contracted being under his care, and surely syphilitic.) The patient was kept under constant observation for about four years without treatment and never showed any further signs of syphilis. Leuger has communicated a similar instance.

Mauriac as early as 1881 expressed his belief in the inutility of this attempted abortion, claiming that excision does not attenuate the near or remote consequences of the intoxication.

Wickham points out quite justly that a well-established true chancre may at times not be followed by secondary and tertiary accidents, or may be accompanied by very discrete lesions only, and hence an error may enter into deductions drawn from the patient's freedom from symptoms after excision. It would, however, not be at all likely that any large number of these mild cases would occur in a given series of excisions.

While it is too much at the present time to claim with Diday that if the excision does not succeed it is because it was not done completely enough, it would still be well for future investigators to make sure that they operate early enough, and include in their cut sufficient surrounding tissue to make it reasonably certain that any outlying cells, bacilli, or virus, which might still be harmful to the system have been removed along with the indurated lesion.—*Med. Record.*

GYNÆCOLOGY.

THE REMOTE EFFECTS OF REMOVAL OF THE ANNEXÆ IN NON-NEOPLASTIC AFFECTIONS OF THE UTERUS.

At the French Surgical Congress Spencer Wells said he concurred in Battey's opinion that, in America, the abuse of öophorectomy, especially in nervous cases, has become really deplorable. He believes with Battey that neoplasms of the uterus, or of its annexæ, often furnish indications for this operation, which non-neoplastic affections rarely do. Oophorectomy, however, may be indicated either by dysmenorrhœa or by ovarian neuralgia which has defied all other treatment and threatens either life or reason. In such cases he has witnessed very gratifying results. But it must not be forgotten that, after removal of the ovaries, menstruation may not be arrested; even menorrhagia may occur and suffering may increase and the general health deteriorate. In a certain, as yet indeterminate, ratio of cases hæmatocele may result or recur. In other cases, the knowledge of their sterility has produced a grave disturbance of the mental balance. He does not share the opinion of certain operators as to the alleged frequency of tubal affections and their incurability without operation. Lawson Tait divides his cases somewhat arbitrarily into three classes: Those in which öophrectomy is done: (1) Because either of some uterine lesion or of the symptoms resulting from it. (2) Because of troubles arising from inflammatory diseases of the annexæ. (3) Because of various nervous disturbances dependent on menstruation. The results obtained in the first category are as follows: Of 274 cases of myomata, 6 were immediately fatal, 8 unsatisfactory, and 257 completely cured—that is, either the symptoms ceased completely, and either the tumor disappeared entirely or ceased growing, or the principal symptom of the disease was completely and definitely relieved. Of this series, to his knowledge, but a single case has been sent to an insane asylum, and this one was evidently insane before the operation. In three other cases mania was completely cured by the physical relief afforded by the operation. A number of cases of eccentricity were likewise relieved. Marked non-development of the uterus associated with normal tubes and ovaries sometimes requires removal of the annexæ for the relief of the intolerable suffering caused by abortive efforts of the uterus to perform its periodical functions.

The results of operation in these cases differ in no wise from those already described. In the second class of cases Mr. Tait has not found time to tabulate his results, and therefore is unable to speak so dogmatically. In this class of cases, however, the underlying conditions are quite different from those of the first class, and the operation itself presents indefinite and indefinable differences of detail. Although often taxing the resources of the surgeon to the utmost, the operation should never be abandoned; contrary to the opinion of many competent surgeons, it may be completed in every case. Mr. Tait is never deterred by fear of rupture, either of the bladder or of the bowel, from breaking up adhesions that may exist between these viscera and an ovary or even a tube. He has seen urinary and intestinal fistulæ form and persist for several months, but has always succeeded in finally curing them. Deep, suppurating sinuses may occur in 5 per cent. of the cases and persist indefinitely; at least until treated by what Mr. Tait calls "circular drainage." The results in these cases, especially in the graver ones, are slower than in myomata, for here Tait reopened the abdomen and found new cysts formed about the stump of the Fallopian tube. These he removed. One of the cases died, but in the others relief was complete and immediate. The remote effects of this operation may be obtained in such cases without arrest of menstruation; and in some of Tait's most successful cases the menstrual period has not been influenced in any way. In 4 or 5 per cent. of the cases belonging to the second category recovery may be delayed by an effusion of blood into the folds of the broad ligament. These effusions have always taken place either during menstruation or during a seeming menstrual molimen. In most cases these effusions are small and disappear rapidly. The remote results in this category differ very little from those in the first category, with one exception, and that of sufficient importance to deserve especial mention. In chronic diseases of the annexæ one of the most distressing symptoms is inability to endure marital relations. In most cases requiring surgical intervention such relations have been suspended for a long period, but may generally be resumed within a few months after removal of the appendages. As to the third series, Mr. Tait confesses that he has hitherto observed what seems to him now excessive prudence. Experience in a few well-marked cases of menstrual epilepsy inclines him to a more favorable opinion than he formerly entertained. He reports his first 2 cases. In both the result was brilliant and permanent. —*Gazette des Hopitaux.*

CURETTING OF THE UTERUS FOR METRORRHAGIA IN A YOUNG GIRL.

Dr. J. J. Conner, in the *Inter. Jour. Surg.*, reaches the following conclusions:

1. I consider curetting of the uterus a safe operative procedure when performed with reasonable care and skill.

2. It is one that may be undertaken with good results by any general practitioner who is competent to attend the ordinary cases of obstretric and gynæcological practice.

3. It will often rapidly cure metrorrhagia when drugs fail.

4. In performing the operation both the dull and sharp instruments are required.

5. Notwithstanding that Emmett says that "the ingenuity of man has never devised an instrument capable of doing more harm," I regard the sharp curette of Sims a useful and necessary instrument, and capable of doing just what it was devised to do, and what no other instrument can do, viz., of shaving off those hard, tough, gristly granulations from the uterine mucous membrane. It was devised by a *surgeon* for the use of *surgeons*, and any one who does not possess sufficient skill should leave it severely alone. True, you cannot *see* it work, but you can *feel* it. Of course, not all cases will need the sharp curette.

6. I would call attention to the youth of this patient, and the entire absence of pain during the whole course of her trouble.

7. I consider this case an example of the triumphs of antiseptic surgery in the hands of a common country practitioner.

OBSTETRICS.

FRACTURES OF THE LEG DURING PARTURITION.

Bergner reports five cases (*Rev. Mens. des Mal. de l'Enf.*, March, 1891,) in children from six months to three years of age, of fracture of the leg occurring during parturition. The fractures were followed by pseudo-arthroses, and the cases were treated by resection. The fracture, which is usually located at the lower half of the tibia and fibula, is caused by traction upon the legs at the time of birth. The mechanism is that of indirect fractures, and the fractures present all the characteristic signs of indirect fract-

ures of the tibia and fibula. The question arises: Why does pseudo-arthrosis instead of consolidation occur in these cases? In the cases under consideration there were no morbid constitutional conditions, hence the cause must be sought in the lesion itself. Of course, defective treatment, or rather an absence of treatment, was primarily at fault, for the children went a long time before it was apparent that any fracture existed. The oblique direction of the fracture, the angle formed by the fragment, and the interposition of the soft parts between the fragments, all are favorable to a pseudo-arthrosis in preference to the customary callus. In all the author's cases there was extreme atrophy of the fragments, which in some of the cases were barely in contact at their smooth ends. If the pseudo-arthrosis had existed some time, the limb would be found entirely atrophied, especially in the segment underlying the pseudo-arthrosis.

The shortening varied from five to fifteen centimetres. The impression of the sole of the foot on the diseased side was narrower than on the healthy side. The author's operation for these cases was an osteotomy. The pseudo-arthrosis was exposed, the fragments resected, and united by suture. An antiseptic dressing was applied and subsequently a plaster of Paris bandage. None of the cases were cured, though the operation was done three times for one of them. These unfavorable results were attributed to the antiseptic method which moderates the inflammatory re-action, and so prevents the formation of a solid callus. The following propositions are offered by the author for future cases: (1) Simple oblique osteotomy or cuneiform osteotomy should be replaced by longitudinal oblique osteotomy or oblique resection of the fragments. (2) Suture and union of the wound by first intention should not be desired, the bones having been brought together and sutured. In this way an intense local reaction will be obtained favorable to the osteoplastic activity of the periosteum. (3) Plaster bandages should be given up. (4) A fracture having been recognized, it should be treated in a proper manner immediately after its occurrence, or as soon afterwards as a diagnosis can be made.—*Archives Pædiatrics.*

PRECIPITATE LABOR.

Dr. P. Strassmann (*Deutsche med. Wochenschrift*, No. 44, 1891) observes that this term has been indifferently applied to rapid labor in the purest physiological sense, and also to cases where the patient, through ignorance, has been suddenly seized with labor pains, and, not knowing their signification, has allowed birth to occur without necessary assistance. Even concealed labor, with criminal intent, has been ranked as "precipitate," and, for obvious reasons, the clinical history of true precipitate labor is of importance in medical jurisprudence. Thus, Dr. Strassmann refers to a case in the Giessen Maternity where a woman was very suddenly delivered without knowing her condition. In a second case, bearing-down pains were taken for a desire to defæcate. The patient therefore sat over a pail, into which the child was born. In a third the patient was asleep until ten minutes before delivery. A precipitate twin-labor is also recorded. As universally admitted, precipitate labor is due either to a large pelvis and readily dilatable soft-parts or to vigorous action of the uterine muscle. The children are, on the average, smaller and lighter than infants born in labor of natural length. Though the maternal pelvis is usually capacious Dr. Strassman has observed one case of precipitate labor where the pelvis was of the flat rickety type. The risk to the child's life is slight, though trifling damage to the cranium is frequent. Fatal hæmorrhage from the cord is rare, in consequence of the low blood pressure in the funis after the establishment of respiration; besides, the cord is often torn through. Ruptured perineum is the commonest injury to the mother in these cases. Flooding after delivery is rare, and in the Giessen Maternity the puerperium was usually normal. There was little or no fever.—*Brit. Med. Jour.*

THE INFLUENCE OF LIGHT UPON PREGNANCY AND UPON THE FŒTUS.

As a result of experiments with mice, Vicarelli (*Annal. di Ostetrica, etc.*, Dec., 1890) found that the absence of light had a tendency to cause early abortion, but did not otherwise modify the course of pregnancy. If the mother was kept in the dark during pregnancy, the development of the offspring was most retarded; the retardation was less decided if, after birth, the offspring were no longer kept in the dark; and least in the case of offspring kept in the dark after birth, the mother having passed pregnancy in the light. The highest degree of development was attained if the mother and the offspring after birth lived in the light.—*Centralbl. f. Gynäkol.*

PÆDIATRICS.

TREATMENT OF ENCEPHALOCELE.

M. A. Broca contributes (*Rev. des Maladies de l' Enfance*, June, 1891) a note on the treatment of encephalocele. He starts with the proposition that patients with encephalocele are doomed to an early death or to become idiots. He utterly condemns treatment by pressure or by puncture and injections of iodine; in those children who escape suppurative meningitis after such treatment the tumor very seldom diminishes, much less disappears. He recommends excision. The base of the tumor is reached by a double incision leaving two small flaps to be used for closing the wound. He condemns incision of the tumor as liable to lead to serious consequences owing to subsequent draining away of cerebro-spinal fluid; he prefers to place a ligature around the base at the deepest point which can be reached. He does not speak decidedly as to the necessity of suturing the periosteum. He thinks that the fear of removing important quantities of the cerebrum may be set aside. The substance of the encephalocele is not often a portion of the cerebrum proper but is a true tumor. In König's case, in which it looked very like a mass of cerebrum, it turned out to be telangiectatic glioma surrounding a very small quantity of cerebral tissue; in Berger's and Perier's cases it was a "cerebroma." In Picque's case, however, though the encephalocele consisted of a cystic dilatation of a portion of the occipital lobe and the cerebellum, the patient recovered, and, in M. Broca's opinion, would have been in a worse case if untreated. Sufficient time has not yet elapsed to permit the formation of a definite opinion as to the subsequent mental development of these children after excision. In Berger's case, in which a cerebroma was removed, the child, at the age of 18 months, appeared to be of "sufficient intelligence. As much cannot be hoped in cases such as Picque's, but the diagnosis of the contents of an encephalocele being impossible it is desirable to operate by excision in all cases. The age at which operation has been performed has varied from a few days to some months, but most of the children less than one month old have died. Strict antiseptic precautions should be observed, several of the deaths having been due to the wound becoming septic.—*Brit. Med. Jour.*

EUCALYPTUS OIL IN THE TREATMENT OF SCARLET FEVER.

The oil of eucalyptus globulus has been used in the treatment of scarlet fever, and favorable reports as to its value have recently appeared in *The Lancet* and elsewhere. A specific action as a curative agent has been claimed for it in some quarters. I would wish to place on brief record my 'own experience with this drug. Amongst a total of 305 cases of scarlet fever dealt with in this Hospital during the year 1890, forty-seven were treated with eucalyptus oil. Forty-four of these cases were consecutive in order of admission, and took the remedy internally (from two minims to five minims, according to age), administered in mucilage and water, every four hours, for periods of two weeks and upwards from the day of admission. In a certain proportion the oil was also used either in spray or as a lotion with water to cases presenting severe throat symptoms; and the lotion form was also employed to irrigate the nostrils and naso pharynx, where the disease had implicated these parts, giving rise to the intractable and deadly "nasal coryza" of scarlatina. In the result there occurred amongst these so-treated cases four deaths, and in no fewer than twenty cases the various complications or sequelæ native to this protean disease arose, including of the severer forms acute nephritis (five cases), multiple pyæmic abscesses (one case), cervical cellulitis (several cases), "rheumatism," pericarditis, and endocarditis. Albumen was found in the urine in sixteen cases. This mortality and complication rate is above rather than below that for all cases during the year. The only definite result noted from its internal administration in these cases was that the mixture caused vomiting in several children. Special stress has been laid upon its efficacy in improving the ulcerated or otherwise diseased throat conditions present in scarlet fever. In these cases it displayed no advantage beyond that due to the lotion form in which it was used, at least equally obtainable from other remedies in use here, and most noteworthy as bearing on this point, are two cases in the series in which, during its use, secondary ulceration, the so-called "diphtheritic ulceration" of scarlet fever, spreading forward from the palatal arches, invaded the hitherto healthy tissues. It was used both in lotion form and mixed with olive oil as a dressing to wounds and abscesses, and in this shape formed a fragrant

and unirritating substitute for carbolic acid. Its efficacy as a deodorant is undoubted. It was not smeared in any greasy preparation over the skin of any of these cases. This is always an unclean and unwholesome proceeding, and should not be adopted.

The conclusion arrived at from a consideration of these cases with regard to the value of eucalyptus oil in the treatment of scarlet fever is that, as a curative agent, it possesses no value, that it neither mitigates the severity nor modifies the course of the disease, that it fails to prevent serious complications and sequelæ arising in due course, and that as an auxiliary to the ordinary methods of treatment it possesses no obvious advantages. Yours faithfully,

DR. C. KNOX BOND, in the *Lancet.*

HYGIENE.

EARLY RECOGNITION OF TURERCULOSIS IN CATTLE.

A most remarkable observation has recently been made by M. Léon Mandereau, of Besançon, which if corroborated must alter very considerably our ideas on the subject of the distribution of the tubercle bacillus in generalized and local tuberculosis. This observer removed from the eyes of cattle that had succumbed to tuberculosis a drop of the aqueous humor, stained it according to Ehrlich's method, and found that the characteristic tubercle bacilli were present sometimes in small, but always in sufficient numbers to be readily identified. This opened up the way for the early diagnosis of tubercle, and M. Mandereau made careful examination of more than a score of animals suffering from tuberculosis in various stages. As he expected, he found the bacillus in the aqueous humor in all cases where the condition was generalized; but, more remarkable still, he found them even in those cases where the disease was confined to the lungs and pleura, and even when it was present only in the liver. This being the case, the diagnosis of tuberculosis could be made comparatively easy during life. This observation is so startling that much hesitation must be felt in accepting it; though made in perfectly good faith, it may be nullified by some undetected fallacy; and until it has been shown that all sources of fallacy were eliminated, it will be well to suspend final judgment. Should it prove to be true, it would be difficult to understand how Cohnheim and Salomonsen's experiments on the production of intra-ocular tuberculosis are to be explained, if tubercle bacilli in the anterior chamber, when introduced naturally along the lymphatics, do not give rise to any marked symptoms of tuberculosis. Of course, here it may be argued that a wound of tissues was produced, and that the conditions are therefore not the same. Another point for consideration is that, if these observations be correct, we shall have to revise all our notions as to the presence of tubercle bacilli in the blood and lymphatics of the system generally, even in cases of localized tuberculosis—conditions in which it has been held that tubercle bacilli were localized not only in their action, but also in their distribution. If the wound theory is to hold good at all, we should expect to find that after puncture of the cornea for the removal of the fluid, the tubercle nodules should make their appearance in the eye; and if these nodules do not occur, it is certainly presumptive evidence that tubercle bacilli are not there. Of course upon such a point as this depends the possibility of the application of the method, even if other observers are able to substantiate M. Mandereau's observations. It is not now necessary to consider this question as regards the human subject, except in those cases of acute general tuberculosis which frequently are indistinguishable from enteric fever or certain forms of pneumonia; in such cases it might be valuable, but to the veterinary surgeons, who in their examination of cattle have to contend with numerous, and up to the present almost insuperable, difficulties, it would be of great value.—*Brit. Med. Jour.*

A SIMPLE REGIMEN IN OBESITY.

The *Journal de la Santé* attributes to a medical officer of the French army the latest "cure" for obesity, which is strangely simple in its carrying out. The form of diet was simply a restriction to one dish at each meal, irrespective of what that dish might be, and no matter whether the quantity consumed was greater or smaller, it was made to satisfy the desire of food to the full at each meal. No supplementary dishes, such as soups, deserts or condiments were allowed; one single dish, and that taken plain, was found to satisfy the appetite much sooner than a variety of dishes, even if the quantity was apparently smaller and on almost an abstemious scale. This regimen was employed also in the case of a lady whose embonpoint threatened too rapid increase, with good results and without any discomfort in the observance of the restrictions. In fact, in one or two instances the reduction of cor-

pulence has seemed to go on rather too rapidly, and it has been deemed best to take means for restoration, in a measure, of that which has been lost. Under this system, as under most others, the excessive imbibition of liquids has to be forbidden, care being taken not to enforce the abstinence from water, especially, to the point where symptoms of circulatory depression arise from insufficiency of volume of blood in the vessels. —*Annals Hygiene.*

MEDICAL CHEMISTRY.

INCOMPATIBILITY OF COCAINE AND BROMIDE OF SODIUM.

In *La Pratique Médicale* for June 19, 1891, it is stated by M. L. Racine that having to prepare a solution of bromide of sodium and hydrochlorate of cocaine, on dissolving these substances in water and mixing them a grumous precipitate was formed, which gradually rose to the surface of the liquid. It seems that this precipitate is actually the cocaine, which is thrown out of solution, and the dangers of such a mixture are self-evident, for the cocaine floating on the top of the mixture would be given in a larger dose than was intended.

PHARMACEUTICAL PROGRESS.

Test Papers.— E. Dieterich made a serious of test papers by impregnating filtering paper with solutions (1:250) of the following salts; Potassium ferrocyanide, this will indicate one part ferric chloride in 25,000 parts of water and one part copper sulphate in 2,000 parts of water; potassium ferri-cyanide, which will indicate one part of ferrous sulphate in 40,000 parts of water; potassium sulphocyanate will react with ferric chloride 1:5000; potassium iodide will indicate lead acetate 1:500, bismuth nitrate 1:7000 and silver nitrate 1:1000; potassium chromate will serve to detect lead acetate 1:2000 and silver nitrate 1:3000; zinc sulphide (made by coatingfiltering paper with freshly precipitated and thoroughly washed zinc sulphide suspended in water,) this will react with solutions containing a copper sulphate 1:15,000, lead acetate 1:15,000, bismuth nitrate 1:7000, silver nitrate 1:8000 and mercuric chloride 1:1200. Starch paper can be made to indicate one part iodine in 25,000 parts water; potassium iodide paper one part chlorine in 30,000 parts water; litmus paper was found to be more delicate and reliable than lacmoid paper.—*Pharm. Centralhalle*, 1891, 314.

NEW ALKALOID FROM SEEDS OF CONIUM.

The highest boiling portions of crude coniine contain a new base, which can be separated by repeated fractional distillations in vacuum and subsequent crystallization. It crystallizes in needles melting at 98°, and dissolves readily in alcohol, ether, and chloroform; it boils at 230°–233°, and has the composition $C_8H_{17}N.O$. It is therefore isometric with conhydrine, and the name *pseudo-conhydrine* has been suggested by Ladenburg, who has examined the alkaloid. —*Chem. Zeitung.*

NEWS AND MISCELLANY.

AMERICAN SURGICAL ASSOCIATION.

Programme of the Annual Meeting to be held in the Main Hall, Grand Army Building, 1412 and 1414 Pennsylvania Avenue, Washington, D. C., September 22, 23, 24, and 25, 1891.

September 22—Tuesday. *Session at* 10 *A. M.*

Roll Call.

President's Address.

Executive Session.

I. Present status of brain surgery. By Dr. D. Hayes Agnew, of Philadelphia. Abstract: Observations and results of Philadelphia surgeons in cases of epilepsy, traumatic and Jacksonian; abscess; hæmorrhage; hydrocephalus; microcephalus; cephalalgia and tumors. Discussion by Mr. John Chiene, of Edinburg, Scotland, Dr. W. W. Keen, of Philadelphia, Pa., Dr. C. B. Nancrede, of Ann Arbor, Mich., Dr. Roswell Park, of Buffalo, N. Y.

II. Report of the Committee on the results which should be considered as satisfactory, of treatment of fractures of the shaft of the femur. By Dr. Stephen Smith, of New York.

Afternoon 3 *o'clock.*

The Association meets with the Congress in the main hall of the Grand Army Building. Subject: Conditions underlying the infection of wounds, including a discussion of disinfection with reference to treatment of wounds; of the relation of bacteria to suppuration; of the resistance of tissues to the multiplication of bacteria; and of the effects of antiseptic agents on wounds.

September 23.—Wednesday. *Session at* 10 *A. M.*

III.—Aseptic and antiseptic details in operative surgery, by Dr. A. G. Gerster, of New York.

Abstract:—1. Personal cleanliness and the cleaning of the field of operation are to be accomplished by mechanical procedures rather than disinfectants; soap and brush *versus* chemicals; brushes hot-beds of infection; their cleansing by boiling.

2. Dressing materials to be sterilized by steam; advantages of this plan.

3. Instruments to be sterilized by boiling in soda solution to prevent rusting.

4. Sponges, their cleansing, preservation, substitutes and use.

5. Technique of operating; advantages of employing few instruments, sponges and assistants; clean dissection, that is, avoidance of tearing and bruising of tissue; careful hæmostasis; no irrigation except where a special indication arises in the shape of existing or accidental contamination by fæces, urine or extraneous filth (as for instance in compound fractures.)

6. Drainage by tubes often unnecessary; its substitutes; where the tubes are indispensable.

7. Dressing, their manner of application and reason of efficiency; *a*, moist; *b*, dry absorbent dressing; *c*, sealing of wound by collodion.

8. In combating septic morbid processes, mechanical measures, such as incision, drainage and irrigating, of more importance than the employment of chemicals.

Discussion to be opened by Dr. Robert F. Weir, of New York, Dr. J. Collins Warren, of Boston, Mass., Dr. J. William White, of Philadelphia, Pa., Dr. Joseph Ransohoff, of Cincinnati, Ohio.

IV.—Surgical treatment of injuries and diseases of the vertebral column, by Dr. J. William White, of Philadelphia, Pa.

Abstract:—*A*. Congenital deformities—spina bifida; review of operative methods.

B. Tuberculosis of the spine. 1. Indications for operative interference. 2. Cases in which the focus of bony disease may be removed. 3. Relief of paralysis in spinal caries after pointing of a psoas or iliac abcess. 4. Paralysis in Pott's disease generally the result of an external pachymeningitis. 5. Pus to be evacuated whenever accessible; treatment by extension process plaster jacket; resection. 6. In caries of portion of the arches with paraplegia, we should almost always operate. 7. Exposure of cord, if bodies of lumbar vertebræ are affected, to relieve pressure and remove diseased bone. 8. Where compression of cord is thought to be due to anterior pachymeningitis, an operation can rarely liberate pressure.

C. Neoplasms. Amenable to operative interference.

D. Traumatism. 1. Some objections urged against operative interference in spinal traumatism unsupported by clinical facts; others largely due to well-founded dread of: *a*. shock; *b*. consecutive inflammation. 2. Recent results of operative interference encouraging. 3. Operation contra-indicated where disorganization of cord is caused by a severe crushing force.

Discussion: Dr. Maurice H. Richardson, of Boston, Mass., Dr. H. H. Mudd, of St. Louis, Mo., Dr. John B. Roberts, of Philadelphia, Pa., Dr. Charles B. Porter, of Boston, Mass., Dr. Robert Abbe, of New York, Dr. W. W. Keen, of Philadelphia.

V. On retro-peritoneal abdominal tumors, and especially those involving the kidney. By Dr. A. Vander Veer, of Albany, N. Y.

Abstract: Tumors—retro-peritoneal in their origion, sources and character; anatomical relations; from retro-peritoneal connective tissue and lymphatic glands; from the supra-renal capsule of the kidney; they may be present anteriorly between the folds of the mesentery or displace the viscera *en masse*, or posteriorly in the dorsal or lumbar regions; they may be benignant or malignant, cystoma, fibroma, myxoma, sarcoma or mixed growths. Gross and minute anatomy. Diagnosis: Difficulties: Indirect by exclusion, from tumors of the viscera, is often impossible. Use of aspirator. Prognosis: Rapid growth is evidence either of primary malignancy or secondary degeneration and infiltration. Operative treatment has not been followed by encouraging results. Treatment: In what cases, if not all, shall operative treatment be undertaken? Difficulties attending the operation. Intimate connection with peritoneum, the viscera and great vessels. Résumé.

Discussion: Mr. Reginald Harrison, of London, England, Dr. Robert Abbe, of New York, Dr. William T. Bull, of New York, Dr. Frederick E. Lange, of New York.

Afternoon, 3 *o'clock.*

The Association meets with the Congress in the Main Hall of the Grand Army Building.

Subject: The late manifestation of syphilis.

September 24—Thursday. *Executive Session at* 10 *A. M.*

VI. Recurrence of cancer of the breast, by Dr. Frederick S. Dennis, of New York.

Abstract:—In a study of the cases of carcinoma of the breast only those cases will be utilized in which a thorough microscopical examination has been made by a well-recog-

nized pathologist; all other cases are to be excluded as worthless. The recurrence of carcinoma in the breast is influenced by: 1. The period of time from first appearance of the growth to the date of the operation. 2. The extent to which infiltration has taken place by any one, or all, of the three well-recognized ways of dissemination. 3. The radical character of the operation itself. 4. The histological character of the carcinoma itself. 5. The appearance simultaneously in both breasts. 6. The personal factors of the individual, such as age, sex, marriage, fecundity, sterility, pregnancy, traumatism, heredity, menstruation, metastasis, mental condition, locality, etc.

Discussion: Mr. Thomas Bryant, of London, England, Dr. Hunter McGuire, of Richmond, Va., Dr. Lewis S. Pilcher, of Brooklyn, N. Y., Dr. D. Hayes Agnew, of Philadelphia., Pa., Dr. L. McLane Tiffany, of Baltimore, Md.

VII. The treatment of tuberculosis of bones and joints by parenchymatous and intra-articular injections, by Dr. Nicholas Senn, of Milwaukee, Wis.

Abstract: Introduction. 1. Tincture of iodine. 2. Carbolic acid. 3. Arsenious acid. 4. Corrosive sublimate. 5. Phosphate of lime. 6. Balsam Peru. 7. Camphorated naphthol. 8. Iodoform; experimental studies; clinical results; immediate and remote dangers; action of on tubercular tissue; indications; technique.

Discussion: Dr. Lewis A. Stimson, of New York, Dr. John Ashhurst, Jr., of Philadelphia, Pa., Dr. Frederick E. Lange, of New York, Dr. A. G. Gerster, of New York, Dr. A. T. Cabot, of Boston, Mass., Dr. D. D. Bramble, of Cincinnati, O.

Afternoon, 3 *o'clock.*

The Association meets with the Congress in the Main Hall of the Grand Army Building.

Subject: Fibroid processes (chronic interstitial inflammation, scleroses); their pathology and etiolygy, with special reference to the influence of diathesis and heredity.

September 25—Friday. *Executive Session at* 10.00 *A. M.*

VII. Treatment of fractures involving the elbow joint. By Dr. Lewis A. Stimson, of New York. *Abstract*: 1. Causes of limitation of motion after recovery; *a*, changes in the relation of the parts of the joint; *b*, overgrowth of bone; *c*, peri-articular. 2. Causes of deformity; treatment; reduction; maintenance—elbow flexed, elbow extended; after treatment.

Discussion: Mr. Arthur Edward Durham, of London, England, Dr. D. Hayes Agnew, of Philadelphia, Pa., Dr. N. P. Danbridge, of Cincinnati, Ohio, Dr. R. A. Kinloch, of Charleston, S. C., Dr. D. W. Yandell, of Louisville, Ky., Dr. Stephen Smith, of New York City, Dr. E. M. Moore, of Rochester, N. Y., Dr. James McCann, of Pittsburg, Pa. In addition to the above the following papers are offered and will be read as opportunity offers at the end of each day's programme:

1. Fractures involving upper third of femur, exclusive of neck, by Dr. Oscar H. Allis, of Philadelphia, Pa.

Abstract: 1. The infrequency renders it improbable that any single observer can speak authoritatively upon the subject. 2. Pathology. A study of the deformity as presented in pathological museums; its uniformity suggests a special agency for its production; an agency suggested at variance with the usually accepted one. 3. Permanent lameness or weakness in the limb not the result of insufficient bone repair; an inquiry into its cause. 4. Deformity in the upper compared with that in the middle and lower thirds. 5. Treatment; inquiry into the defects of prevailing methods; treatment suggested. 6. Faulty professional standard of what constitutes a good cure. 7. Appeal to surgeons for a thorough reopening of this important subject.

2. Thoracic surgery, by Dr. De Forest Willard, of Philadelphia, Pa.

Abstract: 1. Wounds and injuries of thorax. 2. Tumors of the thorax. 3. Conditions of disease. 4. Pus accumulations.

3. A case of diffuse hypertrophy of the breasts, with photographs. By Dr. C. B. Porter, of Boston, Mass.

4. Fractures of the bones which form the elbow-joint and their treatment. By. Dr. Levi C. Lane, of San Francisco, Cal.

5. Old unreduced luxations of elbow. By Dr. Lewis A. Stimson, of New York.

6. The study of a case of hemiplegia with aphasia, following ligature of common carotid artery. By Dr. J. Ewing Mears, of Philadelphia, Pa.

7. Investigation of pistol shot wounds of the skull, and their treatment. By Dr. E. H. Bradford, Boston, Mass.

8. The result of some experiments in the filling of cavities in bones following operations for caries. By Dr. E. H. Bradford, Boston, Mass.

The time for discussion will be limited to ten minutes for each speaker.

Members of the Medical Profession are cordially invited to attend the meetings of the Association, except when it is in executive session.

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Clinical Lectures.

VALVULAR DISEASE OF THE HEART.

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A Clinical Lecture Delivered at Bay-View Hospital.

Gentlemen:—I bring before you to-day a number of heart cases, not because I expect to show you anything new in them, but because I wish to illustrate several points of practical importance; these cases are, two of apex systolic murmur, one pre-systolic murmur, one double basic murmur, and one case of tobacco heart. You may notice that I simply designate these as murmurs and I do this purposely, for I wish you particularly to avoid the error of saying after an examination that when you hear a systolic murmur at the apex of the heart you necessarily have a mitral regurgitation. There are other things than the murmur alone to be guided by.

In correctly diagnosing these cases as well as others, I have of course laid great stress on the importance of physical signs found in the chest and a careful study of the normal heart sounds. Knowing the normal heart sounds and the normal areas where these sounds or their abnormal substitutes or murmurs can be heard with the greatest intensity, and applying these two points to a case of supposed valvular disease, it would seem at first sight easy to make a correct diagnosis in every case; but I think you will find in practice that such is not so, that is, if you rely on the chest sounds alone; for example, I think the pulse is one of the most important aids in making a diagnosis of valvular disease, particularly of the aortic orifice. Indeed the pulse is rarely sufficiently appreciated at the present day. In the early days of medicine, writers thought the pulse very important and even Galen has written a long treatise on the subject, and when it was better understood after Harvey's discovery of the circulation, it was still further studied very carefully. But in the more recent times when physical exploration of the chest was taken up, the pulse was neglected, and now it is rarely studied intelligently by physicians.

When you see a case in which you have reason to suspect disease in the chest, feel the pulse, and ofttimes it will tell the whole story, even though a physical examination of the heart show little. We know that arterial tension may point to valvular disease or it may lead to valvular trouble; the tension makes it more difficult for the heart to drive the blood through the vessels and this may give rise to chronic valvulitis, which may result in thickening and contraction of the cusps of the valves with incompetence or stenosis. The loudest cardiac murmurs are those caused by roughening, rigidity or irregularlity of the valve without actual obstruction, and such murmurs are of no importance at first, but later on they may lead to serious trouble. The aortic valve is affected first and the mitral may be affected later on. The pulse tells us the state of affairs most clearly in aortic troubles. In aortic stenosis, for example, the artery is small and full between the beats, but not as a rule very tense, the wave of blood has no forcible blow or ictus, but lifts the finger gradually. In aortic regurgitation the aorta is filled out with blood, but the valves not being competent the column of blood has no support and falls back into the heart, and the pulse collapses at once. This was first described by Corrigan and is called the Corrigan's pulse or water hammer pulse and sometimes the phantom pulse. On inspection pulsation is seen in the carotids and superficial arteries from which a diagnosis may be made. One very good way is to let the patient cross the leg and the pulsation in the popliteal artery will cause a pulsating

movement of the foot. To fully appreciate this pulse you should make the patient raise the arm in order that the effect of the blood against gravity may be observed. A little practice in these cases will enable you to appreciate both the stenotic and regurgitant defects although if we follow these cases to the post-mortem room the two troubles will often be found to be associated. The irregularity of the two radial pulses may cause you in some cases to suspect an aneurism. In mitral disease the pulse is not of so much significance until later on in the disease.

One way to study the pulse is by the use of the sphygmograph, but there are many objections to its use; in the first place it is an expensive instrument and therefore not sufficiently used to be generally understood, again unless one is skilled in its application, it is very misleading, for the tracings may be varied in the same person according to the pressure, and the resulting charts may be a source of error. As I have said above in aortic troubles, it may be of some use, but carefully educate your fingers, always at hand, and you will find that you can often easily dispense with this expensive instrument. In the prosystolic murmur, which is specially noticeable in this case before you, there is usually found a peculiar tremor thrill, or *frêmissement*, first described by Laennec. It may be felt by laying the palm of the hand over the mitral area when its distinct purring sound or thrill is communicated to the hand, felt just before the ventricular systole. This is said to be almost pathognomonic of a presystolic murmur. At any rate it is so often present in this trouble that you should not forget to look for it. It is almost needless to say that the loudest murmurs are often the most unimportant, while the slightest murmurs may be indicative of the most harm. We have all seen cases in which the patient has a murmur like a buzz saw, both audible to himself and all the by-standers, especially when he opens his mouth.

The tobacco heart and the irritable heart may appear unimportant, because we usually hear no heart murmur, but they may give rise to great discomfort and should be treated actively from the start. The Germans lay great stress on percussion of the heart in cardiac hypertrophy, but I must confess I have had little satisfaction from it in most cases. The heart is fixed at its base by the pericardium and great arteries, and when hypertrophy takes place, the apex must of necessity be dislocated. This you may notice in many cases and when you find that the apex beat is more to the left than normal you may look for a hypertrophy. Most of these heart troubles are from endocarditis following rheumatism or from atheroma possibly from some specific trouble.

In the great majority of cases the important etiological factor in acute endocarditis is acute articular rheumatism, and indeed, so often is this the case, as we know, that one of the first questions asked of a patient with valvular trouble, is, if acute rheumatism has ever proceeded this attack of heart disease. But the two important points in the diagnosis between endocarditis from acute rheumatism and endocarditis from atheromatous condition of the arteries is, that in the former the mitral is by preference affected and in patients generally under 40 years of age, whereas in the latter case those over forty are usually affected, and in the aortic valve only, and even if the mitral valve is here involved it is in company with the aortic valve, whereas in acute rheumatism the mitral alone is often affected.

One not uncommon cause of aortic trouble is caused by a sudden over-distension of the heart. Cases have been reported not infrequently of incompetency of the valves from hard work stretching the valves, as well of cases of direct injury from sudden strain. The working classes are particularly prone to this and the men naturally more than the women. In this case the stiffness and incontractibility of the sclerosed vessel offers too much resistance to the column of blood thrown on it during violent exertion and the blood being forced back into the already full left ventricle causes a sudden distension with rupture of the aortic valves.

Valvular murmurs of the right side of the heart are rarely made out. Hæmic murmurs are sometimes heard and occasionally mislead. When the arterial tension is high and a second sound of the heart is sharp and ringing, especially in a patient of full habit, suspect kidney trouble.

Although not exactly belonging to this subject I would add, that these sudden exertions are often the cause of aneurism, for example, the aorta is athromatous and the left ventricle is hypertrophied. In this condition of things a powerful effort of the hypertrophied left ventricle forces the blood through the aortic valves and upon the aorta, causing an aneurism in that part of the aorta which by virtue of its position has the greatest strain brought upon it.

In view of all these facts when a case presents itself to you for diagnosis be slow to make one; in fact never make a diagnosis or

prognosis of heart trouble on a single examination, but rather give the patient some simple remedy and let him return again for a second examination. He may be over-excited and the heart may be acting irregularly and the valves may not close exactly or the cusps of the valves may slide over each other and leave an opening, and this gives rise to a murmur which at a second examination would have disappeared. Of course this is theory but we must think of such theories when we have a case in which a loud murmur is heard at one time and is absent the next. These functional murmurs as they are sometimes called cause much confusion to the physician who bases his diagnosis upon the chest signs alone. Also always examine the superficial blood vessels, look out for superficial pulsation, notice whether the breathing is too frequent and whether there is ansarca or ascites. Again, remember that if there is one thing about which we can learn much in the post-mortem room it is about supposed organic heart disease, for a loud murmur in life may show nothing at the autopsy, while the most diseased heart, after death may have caused no murmur during life.

Unfortunately, or perhaps I may say fortunately, there is not a great deal of scope for treatment of diseases of the heart. In spite of the various substitutes and new remedies nothing seems to take the place of digitalis and even strophanthus, which has just claims for excellence, occupies a second place. In spite of text books and many authorities to the contrary digitalis seems to do good in all the valvular troubles. It not only strengthens the systole and prolongs the diastole but it serves to regulate the heart; theoretically it is contra-indicated in cases where practically it does much good. Cases of tobacco heart improve under lessening of the amount of tobacco used, combined with the use of bromides in large doses, and occasionally digitalis. As it is inexpedient to withdraw tobacco entirely from an inveterate smoker, it is much better to lessen the amount gradually and give directions as to smoking. For example it is better to smoke on a full stomach and cigars are preferable to a pipe or chewing. The pipe is objectionable because the stem collects so quickly the poisonous element of the tobacco which is thus drawn into the lungs in a concentrated form. Smokers are always advised to clean their pipe stems frequently, which they generally fail to do. Such cases are constantly returning for treatment, any amelioration leading to the return of the excessive smoking until the heart is permanently disabled.

When compensation has taken place digitalis should be stopped and iron used. The bowels should always be kept open and if there is the slightest suspicion of dropsical effusion use the compound jalap powder. In plethoric subjects an occasional bleeding does good. Unfortunately cases among the laboring classes too often prove fatal in spite of the best treatment; among the idler and better classes success is more certain, if the diet can be properly regulated and unnecessary excitement banished.

COMMUNICATIONS.

HYPNOTISM AND SUGGESTION IN THERAPEUTICS—TOGETHER WITH CASES AND METHODS EMPLOYED TO CAUSE HYPNOSIS.

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It is to be regretted that with the present rapid advance of the medical sciences many therapeutic measures of value should have fallen into disuse, not on account of their inefficiency, but because they savored of quackery. Recently, however, the profession has become broader-minded, and has evinced a willingness to find good wherever it may be found. In the face of this laudable assertion, it must also be confessed that the medical profession at large, is very easily impressed and very prone to fads. It is almost ruinous to the future of any new remedy or method of treatment for it to become a fad. To become a fad does not mean that it is either carefully studied or investigated, but adopted, for the time being, wholesale, and tried upon every unsuspecting patient that comes along. The natural outcome of such a course is disastrous failure in the majority of cases, and the usual result is that the remedy is soon thrown aside and condemned in the same wholesale fashion as it was initially adopted.

Within the past few years hypnotism has been one of the prevailing fads in medicine, and almost every young practitioner has "had it," while—in truth— very few have given it careful, unbiased study. Its unrestricted and unwarranted use by many has been productive of so much harm, that professional as well as public sentiment has

revolted, and it has been largely denounced as quackery. Even at the clinics of our leading medical schools patients have been put through the most uncouth antics while under hypnotic influence. They have been made to commit imaginary murders, suffer all the agonies of fear of detection, thrown into cataleptic conditions, thrust with needles, and burned with imaginary hot irons, and in numerous ways have had almost every nerve in their bodies set on edge, and then racked beyond endurance. It is scarcely to be wondered at that permanent nervous injuries have been known to result from such experiments. The demonstration of hypnotism in medical schools in this country, as a curative or therapeutic agent, has been largely overlooked. Charcot's theory of hypnotism being an artificial neurosis has been generally accepted, and the subject has been treated in the light of an interesting phenomenon. Not long ago Professor H. C. Wood conducted a series of experiments in the Hospital of the University of Pennsylvania, in which, however, he endeavored to show that the suggestions made during hypnosis were not essential to its successful use in therapeutics. The profession in Germany has been prone to regard hypnotism as entirely worthless. In France, and especially at the Nancy School, hypnotism has been given the most careful study, and the most brilliant results have been achieved.

In this country the majority of writers upon the subject agree that susceptibility on the part of the subject is essential to successful hypnotism, but none lay any stress upon the necessity of skill and experience on the part of the operator. Many of my professional brethren will smile dubiously at my assertion that it requires as much skill and experience to become a successful hypnotist as it does to become a successful surgeon. Also, inasmuch as a steady hand and eye, and a highly developed tactile sense go a long way towards making a successful surgeon, just so, a large amount of nervous energy, a keen eye, and a determined will, will go a great way towards making a good hypnotist.

A good reason for doubting the need of skill on the part of the operator, has been the fact—often demonstrated—that hypnosis can be induced by gazing at revolving mirrors or luminous objects. This, however, is poor reasoning. That an amputation might be performed with a buzz-saw should surely not be a just cause for asserting that no skill was needed in surgery.

It is also stated that everyone is not susceptible to hypnotism, indeed that only about one person out of every ten can be hypnotised. Finally, now that the fad is gradually dying out, the profession is becoming content to see hypnotism laid away, agreeing that it is a dangerous toy, capable of much harm, and very little good.

Personally, it must be confessed, I was at first also more impressed with the apparent quackishness of the method than anything else. The memory of Mesmer's wierd sèances, with his expectant patients crowded around his *bacquets*, and he himself, clad in crimson robes, touching one after another with his wand and causing them to fall into the most violent convulsions—all this was far from impressing me favorably with hypnotism. Still, as it was a fad at the time, and as I was largely engaged in literary work, the subject was continually presented to my mind through the channel of articles and monographs, I finally concluded to give it personal study, and began my labors by reading every work and paper on the subject I could find. For the past three years I have continued this work by making a large number of experiments, both alone and also with several colleagues, and in this paper it is my desire to give the reader a brief account of the results obtained.

The points that I wish to call attention to are, first, that in my experiences nearly every person is susceptible to hypnotism; second, that the success of the experiment is dependent far more upon the skill of the operator than the susceptibility of the patient; third, that hypnotism is a valuable and trustworthy therapeutic agent; fourth, that hypnotism can be freely used without occasioning any unpleasant after effects.

These conclusions, it will be seen, are in direct contradiction to much that has been advanced upon the subject, and advanced too, by able investigators. I, therefore, would not venture to give them utterance, could I not substantiate them by the history of cases, and extended personal experience.

My first experiments, in spite of my theoretical knowledge of the subject, were dismal failures. My patient, although very sensitive, sat smilingly opposite to me, while I for a half an hour at a time tried Mesmer's Charcot's, Bernheim's and Björnstrom's methods one after the other, and finally a combination of all. My third experiment was successsul in so far as putting my patient to sleep was concerned. Having accomplished this I was siezed with the horrible fear of my possible inability to arouse the subject, and my efforts in this respect, al-

though successful, were pitiable and frantic, and the nervous injury done was to myself and not to the patient, who took it all as a huge joke.

After this I grew bolder and more self-confident. Experience also gave additional skill, so that now it is a surprise to me if I cannot induce the hypnotic condition in five or ten minutes at the longest, and often can do so in a few seconds, or merely by a word or gesture of command. Again, since I have had the benefit of extended experience, I have been able to hypnotise any subject that *voluntarily submitted* to the experiment. Since the number of my experiments are well up among the hundreds, it surely is evident that the statement advanced as to only one subject out of every ten being sensitive to hypnotism, is incorrect. I have found hypnotism of value in many forms of neuralgia, in nervous dyspepsia, in the vomiting of pregnancy, in confinement, in hysteria, and cases of nervous or mental depression.

Knowing well that the history of cases is tedious reading, I will, therefore, only quote one or two from each class of cases:

CASE 1—FACIAL NEURALGIA.

The patient was a woman, about thirty years old. She had been troubled with facial neuralgia for several months, and had lost much sleep in consequence. Various anti-neuralgic remedies had been tried but all without satisfactory results. The patient was robust, strong, and not in the least sensitive to hypnotism, or nervous in temperament. She had never been hypnotised before. Placing her in an easy chair before me, I was able to induce hypnosis in about three minutes—by my method described further on—and proceeded, by means of suggestions and gentle stroking over the affected nerve, to relieve the neuralgia; and also strongly impressed upon the patient the certainty of a permanent cure. I allowed the patient then to rest awhile, and again repeated the suggestions, after which I woke her up. On opening her eyes she was surprised to find that the pain had vanished, only a slight soreness remaining. The patient slept that night without interruption. A week later, having taken cold, the neuralgia made its appearance again, but the attack was very slight and passed away in a few hours. Since then—and several months have now elapsed—she has been entirely free from the trouble.

I have before me the histories of a score more of cases of neuralgia in which hypnotism was used, and glancing over them I find that in every case relief was afforded, and in about ten per cent. of the cases a permanent and lasting cure was obtained.

CASE 2—NERVOUS DYSPEPSIA.

The patient was a man about forty years old. Thin, and poorly nourished, very nervous and irritable. Constipation and diarrhœa alternating. The least excitement, or business worry would cause severe attacks of indigestion, lasting for three or four days. At other times he would enjoy comparatively good health for perhaps a week. Mentally the patient was very much depressed and inclined to despondency. Hypnotism, coupled with suitable suggestions relieved every unpleasant symptom. The patient's spirits greatly improved, and with them his general condition. The paroxysms of indigestion grew less frequent and finally ceased altogether. The ultimate complete cure was undoubtedly brought about largely by a change of air and scene; but unquestionably hypnotism was an important factor in the treatment. This patient was hypnotised five or six times. No unpleasant after effects resulted from the treatment.

Two other similar cases were also greatly benefited by the treatment.

CASE 3—VOMITING OF PREGNANCY.

This was the only case of the kind that I tried hypnotism in. The case was a stubborn one and had resisted the usual medication. The patient would awake every morning with violent nausea which frequently lasted until afternoon. The patient, a plethoric woman, was hypnotised at night and, the suggestion made that she should awake the next morning without nausea, and should pass the entire day without sickness. The suggestion was followed accurately. The treatment was repeated on the two subsequent evenings. No morning sickness occurred for nearly a week, and then was so slight as to cause no inconvenience.

Regarding the value of hypnotism in confinement, cases have been reported in which the entire course of labor was rendered painless, through suggestion. This result I never attempted to obtain. The three occasions in which I have used hypnotism in confinement, have been in cases in which a severe and unnatural labor was to be expected, and my efforts were principally directed to bring about a natural labor and to lessen the subsequent nervous shock. In this I was successful. One case will elucidate this.

CASE 4—CHILDBIRTH.

Mrs. J.; primapara; twenty-four years

old; very delicate and poorly nourished. The patient's pelvis was very narrow,—I failed to note the exact measurement,—and she had previously miscarried at seven months, and had nearly died during labor. I hypnotised her five times before her confinement, each time suggesting the various stages of a natural and easy labor, and a painless birth; also that she should sustain no nervous shock and should make a rapid recovery. About a week later I was called at 11.30 P. M. and found my patient in labor, if so grave a term can be correctly applied to the small amount of pain she was experiencing. At 4.00 A. M. the cervix was about the size of a dollar, and the patient dozing, the pains scarcely arousing her. At 4.30 A. M. she remarked that she felt something between her legs. I investigated, and found that the head, of what afterwards proved to be a ten pound male infant, had been born painlessly and without her knowledge! I delivered the rest of the child without delay. There was a slight laceration of the cervix. Subsequent recovery was rapid and devoid of any complications. There was absolutely no nervous shock. The two remaining cases of childbirth, in which I had the opportunity of testing the value of hypnotism, were both multiparæ, and had previously had very severe and tedious labors. In both cases hypnotism and suggestion was followed by easy labor and rapid recovery. Of course it is impossible to state how far hypnotism was responsible for the easy labor; at all events the results obtained were greatly appreciated by both mother and physician. These two cases occurred in the practice of a colleague. Regarding the value of hypnotism in various forms of hysteria, a great deal has been written. Indeed, it is in this complaint that the majority of investigators have found use for hypnotism, not so much as a curative agent, however, as a means of scientific experiment. Hysterical patients are all easy victims to hypnotism, and, what is more, are very easily and very often injured by it. So, my experiments in this class of cases was conducted with the utmost caution. At present my experience has been limited to five cases, all either Hospital cases, or occurring in the practice of some colleague. In one case a complete and, so far, permanent cure was effected. This case is of such an interesting nature, attended by so many unusual complications, and was influenced so remarkably by the treatment, that I intend devoting a special article to its consideration. One other case I have lost sight of, and the three remaining cases are still under observation; all are greatly benefited.

I now come to a class of cases in which hypnotism has given me the most remarkable results. The two following cases, taken from a large number of similar ones, are good illustrations.

CASE 5—MENTAL DEPRESSION FROM GRIEF.

The patient was a woman of refinement and culture, about twenty-four years old. A year previously she had lost one of her parents. Shortly after this she became acquainted with a gentleman while at a summer resort, and a mutual (apparently) attachment and subsequent engagement was the result. After her return home she ceased to hear from her "Gay Lothario" and soon learned that he had been engaged to some one else all the while. Her humiliation, grief, and disappointment were bitter and passionate. Nothing seemed to console her, and her condition gradually became one of dull despondency, with almost daily paroxysms of an uncontrollable grief. These attacks were hysterical in character. Her health became seriously impaired, and the symptoms grew more and more alarming.

After a consultation with her family, it was agreed that I should do what I could without her knowledge, as she was averse to any treatment. So, one evening, while paying a social call, I spoke of hypnotism, related some amusing anecdotes, and finally said how, by means of suggestion, I could induce any desired dream. The patient immediately asked to be hypnotised, with the request that I should make her dream that she was with a certain person who was always in her thoughts. I consented, and in a few moments had the patient fast asleep and dead to all sounds but my voice. I then proceeded to suggest that all feelings of love or desire for the man who had deceived her should vanish, never to return; and that these feelings should be replaced by one of aversion and relief to think that her eyes had been opened; that not even a shadow of sentiment or regret should be left; finally that she should grieve no more, but regain her naturally happy disposition. I also suggested that upon waking she should have no recollection of what I had said or suggested, but that she should obey the suggestions, although forgeting them upon waking. I then, after letting her rest undisturbed for a few moments, gently awakened her. My first question was as to her dream. She said that she had had none, that everything had been a blank. She laughed heartily to think she

had been foolish enough to go to sleep, and then the subject was dropped. But the patient seemed uneasy, and finally stepping aside she took a locket from around her neck, and removed from it the picture of the man in question, and unhesitatingly destroyed it, remarking to a friend near her, that she had been a fool ever to give the man a thought. A few minutes later she retired to her room and destroyed the only other photograph she had of the man. From that day to this—over six months ago—she has not given him a thought or sigh. She quickly recovered her natural bouyant spirits and good health. This patient had never been hypnotised previously, and was only hypnotised the once. She was not told the secret of her "cure."

CASE 6—DESPONDENCY AND INCIPIENT MELANCHOLIA CAUSED BY GRIEF.

The patient was a young mother, of about twenty years of age, and of a refined and sensitive disposition, who had been prostrated by the death of her infant, when only eight weeks old. The patient's labor had been most severe and she was in a very poor physical condition at the time of the child's death. She seemed dull and dazed, was greatly troubled with insomnia, and several times a day would give way to violent paroxysms of uncontrollable grief.

In this case it also seemed advisable to keep the patient in ignorance of the treatment. Accordingly, after she had retired and was asleep, I succeeded—by suggestion, in changing the natural sleep into an hypnotic sleep without arousing the patient. The suggestion was then made that her grief should give place to a feeling of peace and thankfulness that her baby was free from suffering. Other suggestions of a reasoning nature were made and then the hypnotic sleep once more changed into natural sleep. On awakening the next morning, her first words to her husband were, "I can't grieve for baby any more; think only how he might have suffered had he lived!" And so her grief faded away. True, she cannot speak of her infant now without the tears coming to her eyes, but she always adds, "It was for the best, and I'm glad my baby is safe." With due care her health improved and she is now well and contented.

I have the histories of several others of mental depression from various causes, in all of which hypnotism was used with signal success, and without producing any unpleasant symptoms. Surely this field of research deserves more than the mere passing glance it has thus far received from the profession.

METHOD OF PRODUCING HYPNOSIS.

I have reserved a description of my method of inducing, or rather producing hypnosis, for the second part of this article, in the hopes that the histories of a few successful cases would awaken sufficient interest in the reader to cause him to peruse carefully a description that might otherwise seem very prosy; but in which, however, every detail is of the utmost importance to the success of the treatment.

After making a careful examination of the patient and obtaining a history of his case from his own lips—and we will assume that the case under discussion is that of a man, the English language lacking an impersonal pronoun as yet—I also am careful to note his temperament, to find out whether he is skeptical, or believing, nervous or self-possessed. The value of this "sizing-up" of the patient will be apparent to the reader later on. In my conversation, I endeavor to impress him with my self-confidence, and speak with considerable positiveness as to the success of the treatment, but only as far as my being able to hypnotise him is concerned. I then seat the patient in an easy chair, the back of which is sufficiently high to serve as a head-rest, and the form of which is such as to permit him to recline at perfect ease. The arm-chair found in nearly every drawing room answers admirably, but a luxuriously upholstered, deep-seated club chair is the best, it seeming to be especially designed for a quiet nap. In such a chair I ask the patient to make himself thoroughly comfortable, resting his hands upon his knees, and his head resting against the back, which I make more comfortable with a small cushion if necessary. I have the chair so placed that the patient faces the light—either the full light of day, or a strong gas or lamp light. I then seat myself before him on a somewhat higher chair, but so as not to hide the light from his face, and move up close to him, so that I can grasp his hands, as they lie upon his knees, without his extending his arms. My eyes being on a higher level than his, he is compelled to look up, when looking into mine, and this in the face of a strong light; while I am looking restfully downwards with the light over my shoulders. I then take his hands in mine, with a firm, strong grasp, without squeezing, taking care not to extend his arms or to disturb his comfortable position in any way. I then proceed to talk to him

on any subject that I think will arouse his interest and allay any existing nervousness or fear. I endeavor to gain his confidence and interest, and at the same time to quiet him, and induce what might be termed a receptive condition. This I do without looking at the patient. This is all designed to make your patient absolutely submissive. Experience soon teaches you when you have proceeded far enough; and when you have a comfortable, interested and submissive patient before you, the success of the experiment is well-nigh assured. It ought not to take longer than five minutes to induce such a condition. Then ask him to endeavor to follow each suggestion you make, being careful to analyze his feelings before answering. Now raise your eyes to his, and ask him to look intently into either one of your eyes, and not to let his glance waver or change from one eye to the other. Return his look with a fixed stare, which should be maintained for some time without speaking. The voice of the operator during the entire course of the experiment should be well modulated, confident, measured and determined; it should bear in it the ring of absolute certainty. This is absolutely essential. To say, "Don't your eyes feel heavy?" will probably have no effect; but the remark, "Your eyes *are* heavy," made with positiveness will really make the patient's eyes heavy.

Now regarding the gaze with which you transfix your patient. Every physician has had occasion to witness that uncanny, vacant stare of patients in delirium, or maniacs—a stare which seems to look through you instead of at you, and which, at best, is an unpleasant thing to see. This pleasing expression of countenance can be acquired without necessarily becoming either delirious or insane. A similar look may be seen in persons who are "day-dreaming," or in a "brown-study." It may be acquired by trying to look into, or through anything instead of at it. That is, try to look deep into your patient's eye instead of at it, just as you would stand at the open door of a dark room and try to gaze within. I acquired the stare by assiduous practice before a mirror, and when, to all appearances, I was a fit subject for an asylum, I felt sure that I had the right stare.

This gaze is undoubtedly the most important factor in rapid hypnotisation. It holds your patient spell-bound, robs him of power to move hand or foot, tires his own gaze in an incredibly short time, and fascinates him. I have never known it fail to impress even the most stubborn and defiant subjects. Now, while still keeping your piercing gaze upon the patient, almost imperceptibly increase the pressure on the patient's hands, and in a short time you will feel a slight, and gradually increasing, tingling sensation in your hands and wrists, and are safe in suggesting a similar sensation to the patient, in some such words, "you feel a tingling, pricking sensation in your hands, as though you were holding the poles of a weak electric battery." When your patient assents, add, "You see, I can induce any sensation I desire." When the subject realizes—or thinks he realizes—that you, by your hypnotic power, have induced this sensation, the impression is very decided. Presently, the fixidity of the patient's gaze—which you must see is maintained—will begin to tire his eyes. Do not let him see you wink, that is wink only when he momentarily closes his eyes, and he will not know you have done so. Presently you will experience the well-known optical delusion, caused by the steadiness of your gaze, of seeing your patient's face change color and part of it become invisible. Considering that your eyes are not undergoing the strain that the patient's eyes are—he facing the light—you may safely assume that he is experiencing the same optical delusions. Therefore suggest them to him; cautiously, however, waiting for a look, gesture, or expression of assent before proceeding each step. Finally, you can tell him that your entire face will gradually disappear until he can only see the eye he is gazing at. You can now increase this impression by aid of this delusion, and make yourself disappear and reappear apparently at will. To disappear all that is necessary is to remain unmoved, until by your patient's expression you can tell that his vision is blurred. To re-appear, simply move your head ever so slightly forwards; this will change the range of vision sufficiently to rest the patient's eyes somewhat, and your face will become clear again. Now, ask the patient not to speak again, but to keep his gaze still fixed on your eye. Presently his eyes will begin to water, and you can inform him that they burn and are growing heavy, that he can scarcely keep them open, that they are closing, etc., until, sure enough they are closed. Do not, however, imagine your patient asleep, but proceed with your suggestions.

Tell him his eyelids are growing very heavy, that there is a general disinclination to move, that his breath is growing deeper and deeper,

that there is a comfortable feeling of warmth about his body, that your voice sounds farther away (soften it at this junction,) that his arms are getting heavier, and his limbs feel numb, and so on.

Note carefully the response to each suggestion. You will probably see an expression of sleepy content go over the patient's face, his breath becomes deeper and more regular, and his hands are heavy in yours.

Now tell him that he is gradually going to sleep, that he feels comfortable and contented; then add in a firm, commanding voice "you *can't* open your eyes, they are tightly closed; you *can't* open them!" The patient struggles to do so, but in vain. Then slowly release your grasp on his hands, lay them on his knees and stroke them gently but firmly, saying, "your hands are getting heavier and heavier, they feel like lead, you *can't* move them!" Again your patient will make an effort to raise his hands, but they seem glued to his knees. Follow these commands by telling the patient that he is fast asleep, and usually his head will drop to one side, and you will unmistakably see that he is fast asleep, and yet alert to every word you may say. He is now a tool in your hands and ready to receive any suggestion you may give utterance to, but his nerves are also in an exquisitely sensitive condition and easily shocked or injured. The harm in hypnotism is done by putting patients' while in this condition through a series of trying antics. By making the patient open his eyes, the operator can induce the sonambulistic stage of hypnotism; but for therapeutic purposes I have never found this necessary.

As to the nature of the suggestions they are, of course, entirely dependent upon the malady of the patient.

Say, for example, that the case is one of facial neuralgia, the suggestions would be somewhat as follows: "The pain in your face is growing less;"—accompanying this with a gentle stroking over the painful nerve —"now it is quite gone. My touch has made it vanish, and now all soreness is leaving your face; now it also is gone. You will sleep well to-night free from pain, and you will awake to-morrow morning free from pain. When I wake you up all pain and soreness will have completely disappeared. It *cannot* pain you; and the pain will stay away; it *cannot* return," etc. Make each suggestion plain, positive and commanding. Let there be no doubt or wavering in your voice, but speak in a slow tone of positive assurance, and let each word have its effect. It is well to intensify the impression by a repitition of the suggestions once or twice before waking the patient.

Before finally waking the patient let him rest quietly for a few moments, after having impressed upon him that, besides a freedom from pain he is to feel no ill effects from the treatment but to wake up refreshed as from a natural sleep.

To awaken your patient, merely tell him to wake up, without raising your voice. Clap your hands lightly as you do so.

As long as it takes to describe my method —which by the way is somewhat similar to that employed by Bernheim— the whole procedure rarely takes more than fifteen minutes, and is frequently accomplished in less than ten.

I have frequently been able to put sensitive subjects to sleep by a mere word, and always proceed rapidly or cautiously according to the temperament of the patient. However, I have always found it best to proceed gradually, and not to surprise the patient into a sudden hypnosis, although this is frequently possible.

I remember one instance in particular. I had been listening to the conversation of a few chance acquaintances, in a business office of a friend, and hypnotism was under discussion. One of the group—a strong, energetic man, of about forty—was particularly vehement in his denunciation of hypnotism as fraud and trickery. "Why," I said, laughingly, "you don't know what you are talking about. I could make you fall down in one moment, if I wished to!" "That's a lie!" was the quick and rather uncalled for response. Nettled at the taunt, I sprang to my feet, fixed my gaze upon his eyes, and with a commanding gesture exclaimed, "You are falling now, your knees are giving away under you! *Down* you go!" And down he went, sure enough, to the floor. I assisted him to rise, and he got up, pale, trembling violently, and a firm believer in hypnotism.

Such, briefly, is the method that has yielded me the results shown in the cases cited. Far be it from me to claim for hypnotism any undue merit or virtue. It has been merely my desire to point out its sphere of usefulness, and to endeavor to obtain for it an acknowledged place in therapeutics. I am glad hypnotism is not the fad it was last year or the year before, and should be the first to decry its general adoption as a "cure-all." I am, however, equally averse to the idea that so valuable a therapeutic agent should be relegated to the level of such

quackish methods as "Magnetic Healing," "Christian Science," and the like. Hypnotism has a place in therapeutics as legitimate as electricity, massage, or rest-cure.

Finally, I would caution all investigators of the subject not to be chagrined at frequent failures at the outset. The successful practice of hypnotism demands assiduous practice, long experience, and a certain degree of aptitude on the part of the operator. Let us hope that the mind of the profession may not be blinded to any good, surrounded though it may be, by mysticisms and the vagaries of charlatans.

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SOME OF THE RECTAL MALFORMATIONS AND DISEASES OF INFANCY.[1]

BY R. H. WORTHINGTON, M. D.,

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Imperforate anus is a malformation fortunately of comparatively rare occurrence. It is due to arrest of development in fœtal life, the intestine being derived from the inner, while the anus comes from the outer layer of the blastodermic membrane and a failure of the two to unite brings about this condition.

There are several varieties of this obstruction.

1. The anus may be perfectly formed and joined to the rectum, which is simply occluded by a membrane.

2. The anus may be perfectly formed and the anal opening be apparently normal, but it terminates in a blind pouch as does the rectum, and the two may be slightly or widely separated as the case may be.

3. In this form there is no trace of an anus, the rectum terminating in a blind pouch as in the second form at a variable distance from the skin.

4. The rectum may open into some part of the genito-urinary tract—the bladder, urethra or vagina—the last two being more common.

When the opening is in the vagina it is usually better to postpone operating for a few weeks or months as the child's life is not in immediate danger as long as there is a sufficiently large opening to permit of evacuation. As soon, however, as the child is sufficiently strong to bear an operation, an attempt should be made to form an anal opening by cutting down on to the end of a bent probe inserted at the vaginal orifice. The mucous membrane should be brought down and stitched to the skin and the anus kept patent by the daily passage of a small bougie or the mother's finger. If this can be done, the recto-vaginal fistula will usually close in a short time without suturing, though this may be necessary later.

In all cases where an evacution is impossible an immediate operation is indicated and not a day should be lost as the abdomen will only become more and more distended and the difficulty and danger much increased by delay. A careful dissection should be made from the natural site of the anus. The incision should be in the median line upwards and backwards, keeping close to the sacrum. But little if any chloroform should be given, so that any bulging downwards of the rectal pouch may be felt when the child cries. The pelvic diameters in the new born infant are little more than an inch in either direction, so that there is but little room to work in, and unless the gut is found within an inch of the surface, it is usually necessary to remove the coccyx to get more room. A probe or sound in the urethra in the male or in the vagina in the female is a valuable assistance. When the rectum is reached it is important that the gut should be brought down and stitched to the skin if possible, as there is a great tendency to contraction and in any case, it is difficult to keep the anus open. Dilatation by the finger or by bougies must be kept up till the tendency to contraction ceases.

It is impossible to condemn too strongly the practice of puncturing with a trocar in the hope of striking meconium. Mr. Harrison Cripps has tabulated 100 cases treated in various ways, 17 of these cases were treated by puncture, and of these 14 died, and only 3 recovered—a mortality of 82.3 per cent, while of 39 cases treated by perineal incision or dissection 14 died and 25 recovered—a mortality of 35.9 per cent. The dangers of puncture are that there is a great likelihood that either the bladder or the peritoneum will be injured and the rectal pouch will not be found, and if it is found it is almost impossible to keep the opening from contracting, and the child dies later from obstruction.

Should the bowel not be reached by the perineum, colotomy should be done at once. The inguinal operation being preferable unless the abdomen is very much distended, in

[1] Read before the Denver Medical Association and Arapahœ County Medical Society.

which case we are forced to the Lumbar opening.

Cripp says: "Owing to the great improvement in the method of operating, the mortality from inguinal colotomy has now been reduced to less than 5 per cent."

While in New York this year I had the opportunity of seeing two cases of imperforate anus in the service of Dr. Kelsey at the Post Graduate Hospital. In one case the child was in a very low state when Dr. Kilsey did an inguinal colotomy. This was several weeks before my visit. When I saw it the child was well and fat. There was a small anal pouch, and on the introduction of one little finger into it, and the other into the lower opening of the colon, I could plainly feel that the two were separated by an apparently dense fibrous mass for at least an inch and a half. In this case it would have been impossible to keep open any canal that might have been made by operation from the rectal to the anal pouch. The other case I saw Dr. Kelsey operate upon, the anal pouch was about ½ to ¾ of an inch deep. The physician who had attended the mother had punctured with a trocar but had failed to reach meconium. Fortunately he did not set up peritonitis. When the child cried a bulging could be felt in the anus, and on carefully incising in the median line meconium was reached at a depth of about half an inch beyond the anal pouch. Dr. Kelsey was doubtful whether it would be possible to keep the rectum open without stricture occurring. The child was doing well when I left. It was operated upon on the 7th day and the abdomen was so distended that inguinal colotomy would have been very difficult.

Closely connected with this subject is that of Congenital Contraction or Stricture. This may be a case which has just escaped being one of imperforate anus of the first form I mentioned, in which a semicircular or annular band encircles the bowel feeling as if a cord were tied around it. More commonly it is a congenital narrowing of the anal orifice, which passes without notice until the child is old enough to have solid motions. It is then found to be constipated and has to strain very hard to have a passage at all. Insufficient attention has been paid to this condition, which, though not very common, is I believe, frequently enough the cause of infantile constipation to put us on our guard. I would suggest that it is well to examine the anus in all troublesome cases of constipation in children, and, if the finger will not enter easily, advise the mother to insert her finger daily, well anointed and very gently.

I have seen several cases of constipation in the adult in which the anus was no bigger than in a two year old child, which were relieved by dilatation, and I believe that the condition was congenital with them. In one case there was an internal procidentia or partial intussus-ception, which I have little doubt was caused by the straining necessitated by the infantile anus.

Procidentia in children is by no means uncommon and when it occurs the bowel should be carefully examined. If there is a history of bleeding from the anus a polypus will usually be present and should be searched for in every case. If found and removed there will seldom be much difficulty in curing the procidentia. Ascarides are another common cause. Where there is no local lesion procidentia will usually be found to be due to the pernicious practice many mothers and nurses employ by placing a child on a vessel and making it sit there and strain till it has a passage. When a child is constipated and of rather lax fibre this is quite enough to bring the bowel down in course of time. Children strain more than adults anyhow and in them the straighter curve of the sacrum predisposes to prolapse.

The treatment consists in first washing the prolapse bowel well with cold water and alum and water, or any other astringent, and after greasing it well, returning it by gentle taxis. If there is difficulty in doing this Dr. J. C. Davis' method will usually succeed. He places a handkerchief over the prolapse gut and pokes the finger into the end covered with the handkerchief returning first the part that came out last. The finger carries the handkerchief which in its turn carries the gut in and allows the finger to be withdrawn to poke in more handkerchief and gut till it is all reduced. The handkerchief can then be withdrawn by gentle jerks by one hand while the fingers of the other against the anus prevent the gut escaping. A small pad of cotton against the anus with a strip of adhesive plaster drawing the buttocks tightly together prevents the immediate re-occurrence of the prolapse. Care must then be taken that the bowels are kept moderately loose and that the child *always has* its passage either lying down or standing up, never being allowed to squat and strain. While the bowels are moving the mother or nurse should draw one buttock away from the anus. This is a great help in preventing further prolapse. These

precautions must be persevered with for several months till the tendency disappears. If the bowel cannot be kept up in this way the application of fuming nitric acid or linear cauterization may be necessary to effect a cure, but the milder measures are usually sufficient with the efficient co-operation of the mother.

THE FŒTAL HEART SOUNDS DURING PREGNANCY AND LABOR.[1]

BY A. W. HENCKELL, M. D.,
ROCHESTER, N. Y.

Percy called the attention of the profession, about 1818, to this valuable sign in midwifery and legal medicine, by stating that it was possible to determine whether the child be living or not. This subject is usually lightly regarded alike by student as well as medical practitioner, possibly because American obstetricians have given so little attention to this valuable aid in diagnosing pregnancy, or determining whether the child be still alive. European teachers and writers, on the other hand, lay great stress upon the value of fœtal heart sounds and call attention to the importance of such who wish to practice the obstetric art successfully. During pregnancy its chief value lies in the fact that it is one of the *sure* signs to establish the existence of this condition. Once the fœtal heart sounds are heard all doubts are at an end. It is also of value to corroborate other symptoms already diagnosed. The non-detection of the heart's pulsations would not justify a diagnostician in stating that no pregnancy existed. During the stages of labor it is of more *direct* value to life, as it is here that it guides the accoucheur in the selection of his operative procedure, particularly so in the application of forceps. Cæsarian section and even in exceptional cases of mal-presentation requiring version. The student, and the medical practitioner who has never looked or endeavored to find these sounds, can best practice by listening to the chest of the new-born, for here an opportunity is presented much oftener than in the lying-in chamber. The heart sounds can rarely be heard before the sixth month (occasionally at the twentieth week) and in normal presentations are best heard along a line drawn from the anterior superior spinous process to the umbilicus. They are clear, distinct, double pulsations following each other in rapid succession, varying from 120 to 140 beats per minute. The first sound is usually shorter and feebler than the second, which is loud and clear and which is the one usually heard in ordinary auscultating, and heard over the body of the child. If the fœtus lie close to the uterine wall it can best be heard over its dorsal aspect or on the chest, in face presentations. This necessarily varies with the thickness of abdominal walls and the amount of amniotic fluid. When the child's back is turned posteriorly it may not be heard at all. The only signs with which they could be confounded are the placental (or uterine) bruit and funic souffle. While it is true that the latter can be easily excluded on the ground of its infrequent occurrence, yet it is necessary to bear it in mind while listening, and can be differentiated by its faint buzzing sound. The only other important sound then, is the uterine souffle; and no difficulty will present itself even to the inexperienced, to distinguish it from or mistake it for the fœtal sounds, as the blowing sound of the uterine suffle is synchronous with the maternal impulse. The indications of danger to the child are: (1) Feebleness; (2) excessive frequency, and (3) irregularity in rhythm of sound. The sounds usually grow less or disappear during a contraction, but should be heard *immediately* after the pain. The position of the child may also be determined by giving attention to the point where the sounds are *best* made out. Another, but trivial consideration, is the determination of the sex of the fœtus before delivery, as in most cases of male children the pulsations vary from 120 to 125, and in the case of females from 140 to 145. When the number of pulsations is between 125 and 140 it is impossible to state, as this is not an infallible sign.

I am certain that I have been able to save the lives of several children owing to my observing the signs under consideration, and as a result these cases were not added to the already large number of "still-births," about as convenient a term in midwifery as "malaria" in general medicine. In the operations necessitated by deformed pelvis, it becomes of momentous importance to the obstetricians as to the course they aim to in justice to both mother and child. Medical men, particularly such as are called upon to wait upon women anxious for a living child, will readily value a sign which will

[1] Read before the Monroe County Medical Society, May, 1891.

enable them to achieve this object in a great majority of cases.

REPORT OF A CASE OF ABDOMINAL UTERINE TUMOR.

BY EDWARD BORCK, A. M., M. D.,
N. ST. LOUIS, MO.

HISTORY:—Mrs. C. N., a farmer's wife from Kansas, was sent to me by her family physician in May, 1885; she was 41 years of age, five feet six inches high, natural weight 96 pounds, brown hair mixed with gray, blue eyes, had always been in pretty good health, quiet temperament, menstruation regular, of late some leucorrhœa, a small tumor in pelvic cavity of about two years growth.

DIAGNOSIS:—Fibroid of the uterus. Ovaries not implicated.

Refused to operate, advised the patient to go home and wait until her climateric period had passed; if by that time the tumor had not increased very much, and she would be well otherwise, then the tumor would very likely cease growing, or even atrophy after she had passed the critical period, and need no interference. If however, the tumor should become larger, to return and we would see what would be best to be done.

May 15th, 1891, six years later, Mrs. C. N. arrived again at my Private Surgical Home. She came determined to have the tumor removed and get well; she could not stand it any longer, something must be done for her as the tumor had increased in size considerably. Menstruation had ceased for some time.

EXAMINATION.—Patient's weight 121 pounds, circumference over umbilicus 48 inches. Otherwise the patient was in a very good condition, excellent spirits, tranquil, and not the least afraid.

DIAGNOSIS BEFORE OPERATION.—Fibro-cystic tumor of the uterus, left ovary not involved, right ovary may be cystic degenerated, no adhesions except to pedicle. Taking all the circumstances into consideration I advised the operation.

May 17th at bed time she took calomel gr. x, followed the next morning with a Seidlitz powder.

May 18th before retiring a warm bath.

May 19th, in the morning a cup of milk and a slice of bread; a copious enemeta of warm soap water, which cleaned the bowels thoroughly; a vaginal douche of warm water was given, and she was put to bed. At 11 o'clock morphine sulph. gr. ss, and warm water bottles to limbs and body to keep her moist while she slept. At 12 o'clock she took the chloroform with ease. I operated in my usual manner, Drs. Wm. H. Graves and Henry Summa assisting; present, Dr. L. W. Gerling, Mr. Heideman, M. S., and Miss Henriette A. Stoffregen, the nurse.

After opening the abdomen by an incision extending from the pubis to about 1½ inch beyond the umbilicus, a large round solid tumor was exposed; no adhesions anywhere; the ovaries not involved though both degenerated. On the right side of the tumor were several small bunches or protrusions from the tumor and more soft or cystic like; and closely surrounding the right ovary. The elongated uterus formed the pedicle proper, the fundus was involved in the tumor.

I ligated both ovaries with a single silk ligature, separated the peritoneal covering all around bringing into view the pedicle proper, introduced through the uterine pedicle one of my cyst elevators (double needle), tied a strong silk ligature below the needle and around the pedicle; amputated ovaries and tumor with a pair of serated scissors, stopped all hæmorrhage thoroughly, which was very little; she lost in all not over one ounce of blood. The abdominal cavity was cleansed and flushed with the artificial serum. I then touched or amalgamated all the blood vessels with the actual cautery, and stitched the two peritoneal folds together with interrupted fine silk ligature, covering and inclosing the pedicles; again flushed the cavity with warm artificial serum, and closed the abdominal wound with deep seated and superficial silk ligatures, those obtaining a clean shut peritoneal pack. Dressed abdomen in the usual manner. The patient rallied well.

PROGRESS OF THE CASE.—In the evening after the operation her temperature was one degree below normal, pulse weak but regular, respiration slow. She had been a little nauseated for a few hours but had suffered hardly any pain and slept at intervals.

MAY 20TH, MORNING.—Temperature 100⅖, pulse 90, respiration 24. Some accumulation of gas in the intestine. A glycerine rectal suppository relieved her almost immediately.

EVENING.—Temperature normal, pulse 72, respiration 18. Otherwise in good condition and spirits. From this time on she kept at this stage and slowly improved.

Evacuation of bladder and bowels natural.

On the third day, May 22nd, I removed every other deep seated ligature: the wound was closed and perfectly dry. By the seventh day all the ligatures were out, not a drop or sign of any pus, patient was up. On the 14th day the patient walked out to the dining room and took her meal with the family. For the first two days after the operation she was fed on oatmeal gruel, beef tea, brandy, ice, according to circumstances. After that milk, meat, eggs, vegetables, etc. in addition.

The tumor weighed twenty pounds and seven ounces. I presented it to the St. Louis Medical Society with a short history on the evening of the 23rd of May and made a section of the tumor in the presence of the members, and would say that to all appearance the mass was calloid, showing beautifully the uterine tissue, that is the upper part of the fundus of the uterus, from where the growth originated with both degenerated ovaries attached.

General remarks:—It will be observed that I took all possible aseptic precautions. Nothing but clean distilled warm and cold water was used, and the artificial serum for the abdominal cavity, instruments, and ligatures. In my early operations I followed a strict antiseptic plan, carbolic acid spray, etc., etc. In time I have learned better and instead prefer the aseptic method, cleanliness and discipline. No opium, no medicine of any kind was used, nor was it needed in this case. This patient was an admirable patient, quiet, obedient, good spirits with faith in her recovery. I am especially pleased that she took my advice in 1885.

This is my 69th case of ovarian or uterine tumor operated upon, exclusive of all other laporatomics for other causes. Out of my first 25 cases I lost four patients: out of the next 25 cases I lost but one patient. See report in September, 1885.

Remarks on Abdominal Surgery with 50 Cases.—Read before the Mississippi Valley Medical Society, Evansville, Ind., September, 1885. In full in the *Medical Record*, September 26, 1885. Vol. 28, No. 13, whole No. 777. W. Wood & Co., publishers, 56 and 58 Lafayette Place, N. Y. City. Abstract from same in *Journal of the American Medical Association*, Vol. V, No. 14, October 3, 1885, 65 Randolph St., Chicago, Ill. Medical and Surgical Reporter, November 28, 1885, Vol. LIII, No. 22, Philadelphia, Pa.

Out of last 19 cases up to date I lost two patients; these two were operated upon at their houses. The other 17 cases were operated upon and kept under my own immediate and constant observation at my private surgical home, no death.

I would also refer the interested reader to my papers on:

Ovarian Tumors: At what Stage of the Disease is it the Proper Time to Operate?—*Cincinnatti Obstetric Gazette.* March 1880. 101 Inquiries.

Ovarian Tumors: (Two Lectures) Diagnosis of, and Operation. Part I.—*Cincinnati Obstetric Gazette.* September, 1883.

Ovarian Tumors: Diagnosis and Operation. Second and revised edition with six wood-cuts. (Pamphlet.)

Cyst Elevator: Description of, and Method of Operating. Three illustrations.—*Cincinnati Obstetric Gazette.* February, 1879, also Illust. Vierteljahrschrift der ärztlichen Polytechnick. Bern u. Leipzig.

I cheerfully admit that I carefully select the cases I operate upon.

Selected Formulæ.

SPASM OF THE GLOTTIS.

Sir Morell Mackenzie finds that by exciting a rival reflex, the laryngeal spasm is at once overcome. By exciting a paroxysm of sneezing, immediate relief is procured. This is best done by the inhalation of a pinch of snuff into the nares, or pepper may be used in the same way. It is sometimes possible to produce sneezing by tickling the nasal mucous membrane.

ON EXPELLING TAPE WORMS.

In the Polish *Gazeta Lekarska*, No. 17, 1891, p. 327, Dr. Szczesny-Bronowski, of Tcherdyn, warmly recommends the following mixture, which invariably proves efficacious even in most obstinate cases where the usual administration of ethereal extract of male fern, or pomegranate bark, or cousso flowers, has failed:

℞

Extract filicis maris ætherei	℥iij.
Chloroformii	♏ij.
Emulsionis olei ricini	ex ℥vi--℥iij.
Syrupi menthæ	℥j.

M.

Sig. Divide in two equal portions and take both with half-hour intervals, early in the morning, on an empty stomach. The mixture should be well cooled down before using.

In the evening at bedtime, the patient's bowels should be thoroughly cleansed by means of calomel (6 grains) or an enæma. The tape-worm (be it a *tænia solium* or a *botheriocephalus latus*) is expelled, head and all, within four hours after the second dose of the mixture. The addition of chloroform to the latter is important in two regards: on one side, the drug narcotizes the parasite and thus promotes the detachment of its head from the intestinal wall; and, on the other hand, it prevents nausea and vomiting which are so commonly induced by the internal administration of the male fern extract alone.

GONORRHŒA.

I have found nothing equal to hydrastine in treatment of gonorrhœa.

℞

Hydrastine.....gr. i--ij.
Zinci acetatis
Plumbis acetatis } aa.....gr. j.
Apuæ puræ.

M. Sig. Use as an injection after washing out urethra with warm water. Internally, alkalies and copaiba.

—*McIntosh, N. Y. Medical Journal.*

SEAT WORMS.

℞

Tincturæ rhei.....gtt. xxx.
Magnesiæ carbonat.....gr. iij.
Tincturæ zingiberis.....gtt. j.
Aquæ q. s. add.....f℥iv.

M. Sig. Warm and use as injection three times daily.

—*The Doctor.*

Minerba states that he has achieved brilliant results from injections of naphthalin. He uses the following:

℞

Naphthalin.....gr. xv--xx.
Olive oil.....℥iiss--iij.

Sig. Use as injection.

—*Med. Brief.*

DIARRHŒA.

℞

Salol.....℥ij.
Bismuthi subnitratis.....℥iv.
Mist. cretæ, q. s. ad.....f℥iij.

M. Sig. One teaspoonful every two hours.

—*Buffalo Med. Jour.*

ELASTIC MUCILAGE.

Salicylic acid.....℥j.
Soft soap.....℥iij.
Glycerin.....f℥ xx.

Dissolve and add to a mucilage composed of

Acacia.....℥xij.
Water.....f℥xxji.

GUM ARABIC SUBSTITUTE.

Lime, slaked.....℥ 3iij.
Sugar granulated.....℥xij.
Water.....f℥xxij.
Glue.....enough.

Dissolve the sugar in the water, then boil and add the lime. In a few days the lime sinks to the bottom.

SULPHATE OF COPPER IN OBSTETRICS.

Tarnier (*Cblt. f. Gyn.*) has for some time been using a five per cent. solution of sulphate of copper for washing out the uterus and vagina after delivery, and is very well satisfied with the results. From control experiments made with streptococci and staphylococci, and from his clinical experience he believes that he has proved that in this substance we have a readily obtainable, cheap, very soluble, relatively non-toxic, and an unusually active disinfectant; although it is not entirely free from disadvantages. In cases where corrosive sublimate is contra-indicated, sulphate of copper should, he thinks, have the preference over every other antiseptic.

DIPHTHERIA.

J. Simon first thoroughly dries the diphtheritic membrane and then applies to the throat, by means of absorbent cotton, the following solution:

℞

Acid. salicylici.....gr. vi--xij
Alcohol q. s. to dissolve.
Glycerin.....f ℥j.
Infusion eucalypt.....f ℥iss. M.

The least adherent particles are detached, if possible, without injury to the adjacent mucous membrane. These applications are to be made every hour during the day and once in three hours during the night. If the false membrane is very thick and adherent, it is also to be treated with equal parts of the tincture of the chloride of iron and glycerine, two to four times a day. It is also recommended to irrigate the throat after every second application with a glassful of tepid Vichy or boracic acid solution (4–100). Internally a drop of the tr. ferri chlor. may be given in grog or bouillon every hour.—*L'Union Medicale.*

LABORDE'S ANTISEPTIC SOLUTION.

℞

Mercuric bichloride.....grammes 0.25.
Sodium chloride.....grammes 1.00.
Cupric sulphate.....grammes 1.00.
Glycerin.....grammes 10.00.

Dissolve. For use add one liter of water.

EGG LEMONADE.

Beat all together one goblet of water, juice of one lemon, white of one egg, tablespoonful of pulverized sugar. Good in inflammation of lungs, stomach or bowels.—*Annals Hygiene.*

ERYSIPELAS.

Cayet (*Cblt. f. Klin. Med.*) has obtained the best results by spraying the following solution on to the affected parts three times a day for about a minute:

℞

Hydrargyri chloridi corrosivi } aa gr. xxiv.
Acidi citrici }
Alcohol ..... f℥ij.
Ætheris ..... f℥v. M.

URINARY INCONTINENCE.

Watson recommends the following:

℞

Atropine sulphate ..... gr. j.
Distilled water ..... f℥j. M.

Sig. Twice daily (at 4 and 7 o'clock P. M), as many drops as the child is years of age.

—*Therapeut. Monatshefte.*

MILK FOR NEW-BORN INFANTS.

Prof. Parvin recommends the following preparation:

℞

Milk ..... f℥ iv.
Cream ..... f℥ iss.
Water ..... f℥ v.
Sugar of milk ..... ℥ j.

M.

To prepare it, use first the sugar of milk, then the milk, then the cream, then the water.

GASTRO-INTESTINAL CATARRH.

L. G. Broughton recommends the following mixture in severe cases, with profuse and watery stools:

℞

Salicylate of bismuth ..... ℥ ij.
Sulpho-carbolate of zinc ..... gr. iv.
Chalk mixture ..... f℥ i.
Paregoric } of each ..... f℥ ss. M.
Water }

One drachm of this should be given every two hours until the bowels are controlled, after which the following is prescribed:

℞

Calomel ..... gr. j.
Sulpho-carbolate of sodium ..... gr. xx.
Sacch. pepsin (P., D. & Co.) ..... gr. xix.

Divide in ten powders and give one every three hours. If the stomach is not irritable, sulpho-carbolate of zinc is substituted for the sodium salt in the last prescription.—*Therapeutic Gazette.*

INHALATION FOR ACUTE CORYZA.

Hayem has found relief, though seldom cure, follow inhalations of carbolic acid and ammonia. He recommends the following formula:

℞

Pure carbolic acid.
Water of ammonia, aa ..... f℥ j.
Alcohol ..... f℥ ij.
Distilled water ..... f℥ iij.

Sig. Pour a few drops on thick blotting-paper and inhale the fumes for a few seconds.

—*Record.*

CHLORALAMID IN SURGERY.

Dr. Emory Lanphear, of Kansas City, regards chloralamid as an excellent hypnotic, when such a remedy is needed after a surgical operation. He gives from fifteen to thirty grains, dissolved in whiskey, repeating the dose in an hour if the first has not produced the desired effect. He suggests the following as a good formula for the exhibition of the drug:

℞

Chloralamid ..... ℥ ij.
Spts. frumenti ..... f℥ j.

Misce bene et ft. solut. et adde:

Syrupum rubi idæi ..... f℥ j.

Misce. Sig. Dose, one tablespoonful, to be repeated in one hour if sleep is not produced.

This makes a decidedly pleasant mixture of slightly acid taste and fruity aroma and flavor.

CORYZA.

Rex advised the following plan of treatment: Place the patient in a well-ventilated room, with a temperature of about 70° F. Have the patient to wear warm clothing. Rub the chest with some mild rubefacient. If feverish, a foot bath or some fever mixture; later, some expectorant mixture in which there is carbonate of ammonia or syrup of senega. He gave the following prescription:

℞

Tincturæ scillæ ..... ℿ j.
Vini ipecac ..... ℿ j.
Syr. tolu ..... ℿ xx.
Aquæ gaultheriæ ..... f℥ j.

M. Sig. Every two hours.

Every hour or two the patient should take some albumin water, which can be made by taking a pint of lukewarm water and dissolving in it the white of one egg.—*Times and Register.*

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The Editor will be pleased to get medical news, but it is important that brevity and actual interest shall characterize communications intended for publication.

LEADING ARTICLE.

THE STATUS OF THE HYDROCHLORATE OF COCAINE AS A LOCAL ANÆSTHETIC.

The use of cocaine as a local anæsthetic has had the crucial test of time to determine its merits and to prove its utility. Therefore it has passed the experimental stage and has reached the point when we can speak authoritatively on its status as an agent for the local relief of pain in the minor operations of surgery.

Like other remedies, it has a legitimate field of usefulness, and when employed outside of this limit, it is liable to cause both disappointment and possible disaster. When properly used, its action is entirely satisfactory and its employment is attended with as much safety as surrounds the use of any of the well-known anæsthetic agents—either general or local.

It is the misuse of cocaine, the neglect of essential details, which is so often followed by unsatisfactory results, and at times, unfortunate, not to say alarming complications. Such effects are not attributable to the proper employment of the drug under consideration. The use of any anæsthetic, always involves a certain degree of danger; but this fact is not urged as a reason for abolishing the use of these agents; therefore, it should not be used as an argument against the use of cocaine.

In the August issue of the *Therapeutic Gazette*, Dr. Lewis H. Adler, Jr., has an article entitled: "*The status of the hydrochlorate of cocaine in minor surgery, as based upon the experience of Philadelphia physicians.*" In this paper, the author records the views of over fifty gentlemen of this city, regarding their personal opinions as to the merits of the drug as a local anæsthetic. From these replies the author bases the following summary:

1. *In minor surgery,* cocaine, used hypodermically, is of value in all operations in which the circulation can be temporarily arrested, in order to prevent undue absorption of the drug, and, in which free bleeding can

be encouraged at the completion of the operation previous to the tying of the sutures, to allow as much of the unabsorbed cocaine to be washed out as is possible. Attention paid to these two essential points will, as a rule, obviate any untoward results from the use of cocaine employed hypodermically, for anæsthetic purposes. It is likewise important to make use of freshly-prepared solutions, as otherwise the formation of fungi is liable to occur and the preparation to be spoiled. To prevent this alteration, antiseptic agents are added, the best one being boracic acid, as it is the least irritating. Such a solution usually consists of about twenty grains of cocaine and ten grains of boracic acid, dissolved in an ounce of distilled water. *A preparation of this character has been used by the writer with perfectly satisfactory results, even when it has been several months old.*

Another point of considerable importance is to make use of a perfectly aseptic syringe; frequently, in cases where cocaine is used hypodermically, and suppuration follows, it is the fault of want of cleanliness in this particular, and not to the employment of the drug.

A four per cent. solution is as strong as need be used for hypodermic injections. The principal advantages in using a solution of no greater strength are, that the anæsthetic property of cocaine can be made to reach to a larger area with a less amount of the drug than is the case when a more concentrated one is employed; and, furthermore, the dilution of the drug renders it less liable to produce toxic symptoms.

When the circulation cannot be controlled, extreme caution must be observed in the use of the drug, especially is this the case when any considerable quantity is required.

In anal work, cocaine is not of much use as a local anæsthetic; when so used it must be employed cautiously. It is of no use in obtunding the pain of fistulous tracts or of fistulæ *in ano*. Toxic symptoms are apt to ensue when the drug is employed in this region. The rich lymphatic and vascular supply of the part probably accounts for this fact.

For the purpose of controlling the circulation, a piece of elastic tubing is to be preferred to a solid ligature, as less damage is done to the soft tissues and more uniform constriction of the part is obtained.

In amputation of fingers and of toes for injury, less pain is occasioned the patient if the primary injections are made through the wound, reserving the punctures through the skin until a later period, when the sensitiveness of this structure may be made use of in determining the degree of anæsthesia produced.

The quantity of cocaine required to produce anæsthesia varies with the operation and its extent; as a rule, for ordinary minor operations, from twenty-five to forty minims of a four per cent. solution are needed. The length of time necessary for the production of local insensibility under cocaine varies from three to ten minutes.

Individual susceptibility to the toxic influence of cocaine is a complication of sufficient frequent occurrence to surround the use of the drug with due care and caution, but it is not a contra-indication to the employment of the agent as an anæsthetic. Untoward effects may arise from the use of any one of the anæsthetic substances.

Another objection urged by some surgeons to the employment of cocaine for anæsthetic purposes is based on its asserted power of inducing the so-called "cocaine habit." As yet, this influence of the drug is extremely rare. It is most liable to occur among the patients who are informed the nature of the remedy used, and especially is this the case when it is employed internally for medicinal purposes. It is hard to believe that this action of cocaine can be produced when it is employed for its local anæsthetic effect and in the small quantity needed to induce local insensibility.

2. *In genito-urinary surgery*, cocaine is to be used with more than ordinary care as it is in this class of cases that the untoward effects of the drug have been most frequently noted. It is successfully employed to allay excessive irritability of the urethra before the passage of sounds or of bougies; it is important, in such instances, not to allow the solution to

remain in contact with the mucous surface more than a few moments, and to subsequently encourage the outflow of any excess.

In the operation for circumcision, the anæsthetic action of the drug is prompt and efficacious, but it is important to remember that the circulation must be controlled before the injections are made, and that after the foreskin is removed and the sutures inserted, but not tied, that the ligature employed to regulate the blood-supply is removed and free bleeding allowed, that as much of the drug as possible may be washed out of the system.

For the purpose of preventing the pain incident to the removal of venereal warts, or in the cauterization of venereal sores, the drug is satisfactory.

For the production of anæsthesia, previous to the operation of internal urethrotomy, opinions differ as to its efficacy and to the danger involved of producing the toxic effects of the drug. The weight of evidence seems to prove that cocaine is not to be employed indiscriminately in these cases, and when used should be administered with caution and with a knowledge of the possible risks involved. That it is possible to avoid any untoward effects from its use in the operation is shown by the testimony of Dr. John B. Deaver, who has employed cocaine in a large number of operations requiring internal urethrotomy without experiencing the slightest ill-effect to the patient.

3. *In gynæcological practice,* the drug has a limited field of usefulness. As a rule, in operative procedures classed under this head, general anæsthesia is to be preferred, as the patient's knowledge of the exposure of her person is often quite sufficient to unnerve her for the operation, and may even be the means of frustrating the surgeon's work.

For slight operations and those easy of performance, such as the extirpation of vascular vegetations at the mouth of the meatus urinarius, the removal of stitches from the vagina, etc., anæsthesia from cocaine is all sufficient. For the vaginal examination of highly nervous and hyperæsthetic women, cocaine, applied to the orifice of the canal, will render comparatively easy an otherwise difficult operation. For the primary repair of the perineum, when an anæsthetic is indicated, a dossil of cotton saturated with a solution of the drug and placed in the wound will accomplish the desired purpose.

4. *For ophthalmological work,* the surgeon finds in cocaine the anæsthetic *par excellence.* In no other department of surgery do we find its use so widespread and its application so entirely satisfactory. While this is true, it must be remembered that to obtain the best results it is more essential here than elsewhere to employ a perfectly pure drug in a freshly-prepared solution. Many of the untoward effects ascribed to the use of cocaine in eye surgery are due undoubtedly to the neglect of these two essential points.

All of the operations upon the eyeball may be performed under cocaine anæsthesia, except iridectomy for acute glaucoma and enucleation. Even in the latter instance, according to Dr. Albert G. Heyl, where the patient does not come under the influence of the general anæsthetic, or when it is desirable to shorten the duration of the operation, the instillation of a solution of cocaine enables one to begin it earlier than would otherwise be possible; he, therefore, sees no reason why the drug should not always be used in the operation with this object in view.

Owing to the effect of the drug on the cornea in producing drying of the epithelium, it is essential not to use it too long a period before an operation, and, when it is instilled, that the lids be kept closed until the moment of beginning the same.

5. *In operations upon the ear, nose and throat,* cocaine is of great value as a local anæsthetic. It is also of use as a means to render diagnosis of the condition of these parts easier and more certain.

In aural work, according to the testimony of Dr. B. Alex. Randall, brucine excels cocaine as an anæsthetic, and morphine and atropine as analgesics. In nasal cases the drug is of extreme value both in the study and the treatment of abnormal conditions. Dr. J. Solis-Cohen and Dr. Carl Seiler both

speak in the highest terms of its use as an anæsthetic in operative procedures upon the nasal chambers.

For the purpose of rendering the exploration of the larynx easy, the excision or scarification of the tonsils painless, and to permit the painless removal of pharyngeal neoplasms, elongated uvulæ, etc., cocaine is the anæsthetic indicated.

Correspondence.

TWO CASES OF HEART-FAILURE.

Two peculiar cases of heart failure have come under my observation that seem worthy of mention. The first one was that of a girl 15 years of age, very intelligent, with no hysterical tendencies. Whenever she ate fish of any kind she would in a short time be attacked with extreme fainting, and sensation of suffocation; the heart at such times beating slowly and with great feebleness. These symptoms would appear within one hour after eating, and sometimes almost immediately of the ingestion of fish. The amount of fish taken made no difference in the violence of the symptoms. Stimulants were given and speedily followed by relief, but sometimes the tendency to syncope lasted several hours. No other substance was known to produce the symptoms. On one occasion she was attacked when she had not been eating fish, when she went through with all the distressing symptoms following a meal of fish. I inquired carefully after every article she had tasted for dinner and found nothing of a fish nature that she had taken. On collecting her thoughts she remembered that in fixing her bonnet just before dinner she used some fish glue and got some into her mouth, but swallowed none of it. This accounted for her syncope.

Another girl, aged about 19 years, not accustomed to faint on any other occasion except when going into a room lighted with electric lights. She feels a peculiar sensation on entering the room, but may not faint until she returns home, when it will come on and last an hour or more. She never can enter the presence of an electric light without feeling the heart failure coming on. No other kind of bright light, however strong, has the same effect.

John M. Currier, M. D.,
Newport, Vermont, August 5, 1891.

GUAIACOL IODIDE IN THE TREATMENT OF CONSUMPTION.

Editor of the Medical and Surgical Reporter:—The weak affinity possessed by iodine for the organic groups, and the comparative low temperature at which its organic compounds are decomposed with the separation of free iodine, suggested this combination as a proper remedy for keeping in abeyance that form of tuberculous disease of the lungs, where a powerful antiseptic is required.

From the above it would seem reasonable to believe, that those remedies which are vaporized at the ordinary temperature of the body, are taken into the circulation through the medium of the lungs, as readily as when they are injected into the cellular tissue. The introduction of this class of antiseptic remedies into the lungs, and their rapid decomposition—a result of their weak chemical affinity would lead us to expect the most perfect exhibition of their therapeutical properties, from the fact that they are delivered to the blood in a nascent state, which is well known to be the most active condition in which chemical bodies exist. This expectation has been realized in practice, to an extent to warrant the expression of an opinion that the acute, and sub-acute stages of consumptive disease of the lungs, can in many instances be kept under control by this remedy.

Wm. H. Gregg, M. D.,
New York City.

Obituary Notice.

DR. J. REED CONRAD.

Dr. J. Reed Conrad died of pneumonia, August 12th, 1891, at his residence on Twenty-second street, in Philadelphia, at the age of 34. He was a descendant of the Conrad family, which, with thirteen other German families became converts to Quakerism under the teachings of William Penn, and emigrated to America in 1682, and were the first settlers of Germantown.

Dr. Conrad graduated from the Medical Department of the Pennsylvania University in 1879, and was actively engaged in his professional work until his fatal illness began. His devotion to his duty was constant, and his many lovable qualities brought him friends wherever he went. He held active appointments in some of the most prominent medical institutions in this city. He was Chief of the Chest Clinic in

the Philadelphia Polyclinic; Physician to the Out-Patient Department of the Rush Hospital for Consumption; and Chief of the Medical Department of the Union Dispensary. His opportunities for the investigation of disease were of the best, and he took advantage of them with exceptional zeal and enthusiasm. He had a great longing to make the diseases of the chest his life-study, and one of the very disorders, the investigation of which always gave him unfailing interest, was destined to become his mortal enemy. So far as the writer knows his literary contributions to medicine were limited; but at the time of his death he was engaged in gathering clinical material for a paper on the relationship between chest-pains and certain cardiac lesions. He was laid to rest, August 17th, in Laurel Hill Cemetery.

PERISCOPE.

THERAPEUTICS.

ANTIPYRIN IN TETANUS.

Alexandre Paris (*L'Union Méd.* No. 8, 1890) reports the case of an old man who developed symptoms of tetanus—it is not stated whether traumatic or idiopathic—in the middle of June. He improved under chloral, suffered a relapse on the 8th of July, which developed into a widespread involvement of the muscles of the thorax, abdomen and lower limbs; was uncontrolled by chloral, but which, on July 28th, was rapidly alleviated by 13-gramme doses of antipyrin repeated on the two succeeding days, after which not a muscle was convulsed. The drug was administered for the relief of pain in the limbs with the unexpected result not merely of curing this, but of relaxing the spasmodically contracted muscles.

The *University Med. Magazine* calls attention to this single observation in regard to antipyrin, "though unaware that our present knowledge of its physiological action justifies any sanguine expectations, because one case may form a nucleus for others sufficient in number to justify definite conclusions, and because new facts, as the author himself hopes, can alone answer the query of coincidence or cure."

MASSAGE OF THE STOMACH IN THE TREATMENT OF GASTRIC DYSPEPSIA.

Cseri (*Revue de Thérapeutique*, April 15, 1891) employs massage in the treatment of gastric dyspepsia. Two or three hours after a full meal, the patient is placed in the dorsal decubitus, with thighs flexed on the pelvis and the mouth open. The gastric region is first very lightly stroked, the force then being gradually increased to a veritable kneading, always in a direction toward the pylorus. The whole process should last about ten minutes. This massage not only hastens the passage of food into the duodenum, removing at the same time the badly digested and altered remains of previous meals, but also stimulates the contractility of the muscular coat of the viscus and increases the secretion of gastric juice. A short massage of the large intestine should end the séance. The only contra-indication is the existence of complications, such as ulcer or other conditions which may cause hæmorrhage. This treatment is said to be followed by a pleasant sense of relief and often by refreshing sleep. —*Univ. Med. Mag.*

TREATMENT OF CHRONIC ECZEMA BY CREOLIN.

Dr. Patteson read a note on the treatment of chronic eczema by creolin. He had been led to adopt its use from the well-known value of tarry preparations in certain forms of eczema and psoriasis, and from its cheapness, which rendered it suitable for out-patient practice. He briefly referred to two cases of pustular eczema of the scalp—one of eight and the other of three years' standing—in which marked improvement and cure followed its prolonged use. It was applied as a wash or lotion in the proportion of one drachm to eight ounces of water. The value of such a powerful germicide in these cases seemed in favor of Unna's contention as to the parasitic nature of eczema. The President congratulated the Academy on the additional remedy for chronic eczema which Dr. Patteson had brought under their notice. His communication, however, did more, and that was, that it emphasized the importance of perseverance in the treatment for eczema which had been found temporarily useful.—*Lancet.*

THE TREATMENT OF CHRONIC CONSTIPATION.

Dr. T. Flotau recommends for this purpose

the direct application to the rectal mucosa of about 3 grammes of powdered boric acid. In cases where the mucosa cannot be reached, insufflation of the same quantity of powder is employed. In from ½ to 3 hours after the application peristalsis occurs attended with copius fæcal evacuations. The evacuations may occur 2 or 3 times during the day and are never painful. This method never fails in properly selected cases. Experiments made with other remedies yielded negative results. There is no fear of intoxication, as indicated by a large number of cases treated. In three cases failing to yield to other remedies boric acid accomplished the desired result.—*Berlin. klin. Wochenschr.* March 2d, 1891.

TREATMENT OF CHLOROSIS BY SUBCUTANEOUS INJECTION OF IRON-SALTS.

Subcutaneous injection of iron-salts in the treatment of this affection is recommended by Magagni (*Deutsche Medicinal-Zeitung*, April 30, 1891, from *Raccoglitore med.*, 17 and 18, 1890). The pyro-phosphate, citrate, or citro-ammonium pyro-phosphate may be employed in dose of three grammes in a five per cent. solution. The injection is made subcutaneously, preferably in the nates, with a long needle, so as to deposit the solution some distance from the point of puncture. After this a gentle massage of the spot is made to favor distribution and absorption of the solution. Ten cases are reported, all of which were promptly cured by this plan of treatment.—*Univ. Med. Mag.*

PHYSIOLOGICAL STUDY OF CHLORALAMID.

Dr. H. C. Wood and Dr. David Cerna published a paper in *New Remedies* in which are the following conclusions:

Our researches have been made solely upon dogs, and therefore the following conclusions apply directly to those animals.

First. Chloralamid has a slight local influence, and in large doses tends to produce mucous diarrhœa.

Second. It acts more powerfully upon the cerebral cortex than upon any other portion of the nervous system of voluntary life, thereby causing sleep and muscular relaxation; but it is also a feeble spinal depressant.

Third. It has a powerful influence upon the respiration, in moderate dose, by a centric action stimulating the respiratory rate, and probably also increasing the actual amount of air breathed; but in toxic dose causing death by paralysis.

Fourth. Its influence upon the circulation is a very feeble one; the changes produced by small doses being probably secondary to other effects of the drug; toxic doses, however, depress the arterial pressure by a direct action either upon the heart or upon the muscle coats in the arterioles.

THERAPEUTICALLY CONSIDERED.

The results of our experiments indicate that chloralamid is very worthy of trial as a hypnotic. Its action upon the heart is so slight that it bids fair to be valuable as a hypnotic in cases of feeble heart; whilst its stimulating influence upon the respiration would seem to fit it for employment in cases of nervous exhaustion. The exact clinical value of a hypnotic can, however, only be determined by clinical study. Dr. H. C. Wood has used the remedy to a moderate extent in various forms of insomnia, and so far it has seemed to him to be slower and less certain in its action than is chloral. Rarely have unpleasant after-effects been noted, but he has seen in some cases distinct headache. The statement of Hagen and Hüfler that the drug is especially valuable in cardiac asthma seems to be consonant with our experimental conclusions.

METHYLACETANILIDE, OR EXALGIN.

In the *Bull. Gén. de Thérapeutique*, No. 6, 1891, Desnos has made a study of the merits of this drug. He says that the chemical formulæ of exalgin confirms the law established by M. Dujardin-Beaumetz, to wit: that the anti-thermic action will be especially developed in amidogenous derivatives, whilst the analgesic property will be at its maximum in the amidogenous bodies in which for one molecule only of hydrogen, one molecule of a primitive fat, especially of methyl, has been substituted. Exalgin presents itself in the form of a white powder, consisting of long, fine needles, absolutely tasteless, soluble in warm alcohol and in boiling water, but slightly soluble in cold water to which a small proportion of an alcoholic fluid has been added. The physiological effects produced by it in man are very interesting. The action of the drug seems to be entirely exerted upon the bulb and the cerebro-spinal system. Prominent in the impressions produced upon the brain is vertigo. The numerous varieties in which this presents itself are interesting. Sometimes, and this is most frequently the case,

very quickly after the ingestion of the drug the patient complains of a slight mist, as of a veil stretched before the eyes, and this is all. This sensation may be fugitive; its duration is very variable, oscillating between five minutes and a half hour. Sometimes the patients have a sensation of rotation within themselves, or yet it is the surrounding objects which appear to them to revolve around them. In a woman it seemed that her bed sank into the floor, another believed that she was incessantly falling to the side of her bed, and one even grasped the opposite side of the bed to escape falling. These extreme cases are very rare. In general the patient is able, notwithstanding the vertigo, to rise and walk. As a rare exception the vertigo is accompanied with vomiting, and also rarely with chills or cold sensations. In certain patients, but rarely, the vertigo coincides with tinnitus aurium, or this may be replaced by heaviness of the head or by cephalalgia, by a tendency to sleep, or simply a state of torpor, which two patients compared to that in which they had previously been thrown by injections of morphine. Nevertheless, it should be remembered that exalgin is no more a hypnotic than it is an anti-thermic. If the patients sleep, it is because the drug has freed them from the pains which had kept them awake. Some other phenomena reveal an action upon the cord and spinal nerves. Thus, sweats are encountered which may be general and profuse, or limited at times to one region of the body, generally to that portion which is the seat of the malady for which the exalgin is administered. Thus, also, frequently tinglings are experienced, extending to all the members and the tongue, or solely to the points where the neuralgia exists. Some patients complain of flashes of light before the eyes.

All doses may provoke these nervous phenomena. Three and three-quarter grains may suffice, but it is generally when eight and a half grains have been injected that they may be observed. Then, again, large doses, eleven or twelve grains, may fail to produce them. In this dose, however, cyanosis may be observed, though of slight intensity, and not in any manner resembling the cyanosis of grave disease of the heart. The appearance of the free border of the lips is scarcely modified, and upon the skin of the upper and lower lip, and upon the naso labial ridge, a slight grayish-blue tint may be observed. This coloration is not of long duration, usually disappearing on the next day. An examination of the blood of patients to whom exalgin has been administered reveals an alteration of the globules, which seem to be almost, if not completely paralyzed, so that the gaseous changes are not carried on in the proper manner. There is also a diminution of the oxy-hæmoglobin. Exalgin, therefore, has the property of giving rise to anæmia, although this is not a property exclusively belonging to it, but one that is shared by the other anti-thermic nervines. One of the interesting points in the administration of exalgin is the ease with which it is tolerated by the digestive tube. It does not engender any troubles of the stomach or intestines.

As to the dose of the drug, three and three-quarter grains at times suffice to produce a curative effect, complete and lasting. More than this should never be given at a time, but if need be the dose may be increased to two or three times this amount during the twenty-four hours. As M. Gandineau has shown, a tolerance for the drug may be established, so that in giving successive doses it may become necessary to increase the amount given. The affections in which exalgin is of the greatest service are the neuralgias, especially the facial neuralgias, involving one or several branches of the trigeminal, or the occipital nerve, especially if these are of congestive origin from cold or rheumatism. The anæmic neuralgias are, without doubt, very favorably influenced by exalgin. Intercostal neuralgias have been benefited, as also have been neuralgias of the various plexuses, and the ilio-lumbar pains consequent upon uterine and ovarian disease. The visceral neuralgias, angina pectoris, and nephritic colic are benefited, as are also painful and hysterical menstruation. The tremblings of paralysis agitans may be controlled by its use.—*News.*

BANANAS IN CHRONIC BRONCHITIS.

In cases of chronic bronchitis with difficult breathing and scanty expectoration the use of banana-juice has been highly praised. The juice is prepared by cutting up the bananas in small pieces and putting them, with plenty of sugar, in a closed glass jar. The latter is then placed in cold water, which is gradually made to boil. When the boiling point is reached the process is complete. Of the syrup so made a teaspoonful every hour is the proper dose.—*Record.*

MASSAGE IN CHRONIC DYSPEPSIA, DUE TO MUSCULAR ATONY.

This form of dyspepsia is very frequent, usually accompanied by dilatation of the stomach, unattended by local pain, and resists the treatment by the alkalies, hydrochloric acid, nux vomica, electricity, and the revulsant application of plasters, of cold and of heat. Dr. Sédan employed massage in the following manner: With the hand, well-oiled previously, he kneads the stomach in a direction from the cardiac to the pyloric end, making gradual and deep pressure. Without changing the direction the pressure should be gentle, deep, and constant. The fingers should then go through the same movements in the opposite direction. At the end of five or six minutes massage is applied to the entire right iliac region for several minutes. There is usually an escape of gases both by the anus and mouth; and after two or three daily seances continued for five or six days, surprising results are obtained. The procedure is best practised two or three hours after the meal, and in general before the time at which the patient experiences the greatest discomfort. Under this treatment the appetite and sleep are improved, and it is always successful when there is a partial or complete reflex insensibility of the stomach. It has also caused the disappearance of obstinate chronic constipation.—*Gazette Médicale de Liege.*

THE HYPNOTIC ACTION OF URETHANE, SULPHONAL, AND PARALDEHYDE, CLINICALLY CONSIDERED.

Dr. T. Sydney Short, in the *Birmingham Med. Rev.*, gives the following summary of his study:

Age and Sex.—The extreme ages of the patients in the list were 14 and 59 years, and of the 26 cases, 20 were males and 6 females. I could not see that the age or sex affected the action of the drugs in any way.

Disease.—Here it was evident that the drugs had little effect upon cases of sleeplessness due to pain; in the case of thoracic tumor, however, where pain, but not very severe pain, was present, the patient stated that he was certainly easier after the draught containing gr. xxx. of sulphonal. On the other hand, in the case of thoracic aneurism, where again the pain was not very severe, the same drug in doses of from gr. x. –xx. had no effect whatever. Five out of the seven cases of heart disease were greatly relieved, one had a little sleep, but the seventh was not much benefited. In the cases of bronchitis with cardiac failure, they gave good or fair nights and will probably prove to be most useful in this class of case where opium is contra-indicated. In one of the cases of chorea, sulphonal in gr. xx. doses acted most satisfactorily; better I think than the same amount of chloral would have done, although of course, it is impossible to be sure of this. In the other case of chorea, neither the urethane nor sulphonal gave more than a few hours' sleep at a time. In the cases of convalescence after pneumonia and enteric fever, all three drugs proved of great service; after the first good sleep no further dose was required. It appeared as if the bad habit of not sleeping had been broken.

Advent of Sleep.—The times at which sleep ensued were so various that it is not easy to draw any definite conclusions from them. Ten minutes on the one hand, and six or seven hours on the other seemed to be the extreme limits. Both urethane and paraldehyde have probably a more rapid action than sulphonal, but not in my cases to the extent usually considered, for sulphonal in ʒ ss. doses produced sleep in a few minutes on one occasion, and in fifteen minutes on as many as five occasions. The action of sulphonal may be deferred for some hours; on two occasions sleep did not ensue for six or seven hours, and in several cases the sleep seemed better the night after, than on the occasion of the first dose, even when only one was given, but I do not remember any occasion on which no sleep at all was enjoyed on the night of administration, and a good or fair night the next, without a repetition of the draught.

Duration and Character of Sleep.—In the greater number of the cases where sleep was produced it was good in quality while it lasted. If the patient had been wandering or talking much in disturbed sleep for several nights before the drug was given, the sleep following the draught seemed more likely to be accompanied by occasional wandering than when the drug was given for complete absence of sleep with rational wakefulness. It seemed to me that slight wandering was more likely to occur after sulphonal than after either of the other drugs; or, to put it in another way, that after urethane and paraldehyde the patient might wake up for a few minutes and then drop off to sleep again quietly, whereas after sulphonal the wakeful intervals seemed to be replaced by wandering intervals, followed again by sleep of a sounder nature. I thought that sulphonal stupefied the patient more than paralde-

hyde, and certainly more than urethane; and in one case the patient, after gr. xxx. of sulphonal, seemed inclined to wander and talked nonsense before he went to sleep at all.

After Effects.—In nearly every case in which any effect was produced, drowsiness ensued the morning after the drug had been given. The feeling of drowsiness was most powerful after sulphonal, and in fact often produced good sleep during a large portion of the next day. Slight headache was produced in a fair proportion of the cases, and some amount of giddiness in a few only. Following the moderate doses prescribed, no really disagreeable consequences were experienced. In two cases skin eruptions were seen; these have already been referred to. It is reasonable to conclude that they were actually caused by the drug. In one case rashes appeared both after paraldehyde and after sulphonal; in the other, after sulphonal.

General Effects—I cannot point to any derangement of respiration, circulation, or appetite as a result of the drugs administered. If any alteration did occur in the respiration or circulation, it was not noticeable on the ordinary ward charts, and no symptoms occurred to suggest it. No case of cyanosis was seen after the administration of sulphonal.

I think the manner in which the chosen drug is given is important. The best results were those in the cases where sleep speedily ensued, and slight disturbances such as those unavoidable in a large ward were sufficient to prevent the approach of sleep in several instances. On every occasion, so far as it was possible, the patient was prepared both bodily and mentally for a good night's rest; the last day medicine and the last food had been given, the pillows and bedclothes rearranged, and the spit cup or other toilet requisite placed ready, so that he need not be disturbed, and he was told to remain quite still after the draught. Quietness of this nature can be more easily ensured in private than in Hospital practice, and on that account the drugs have a better chance in private than under the more or less disturbing influences of a Hospital ward.

In conclusion, I think that this brief article, although not sufficiently extended to prove more than a few points, and subject, as all like papers will be, to fallacies such as that of the *expectation of sleep on the part of the patient*, yet will tend I think to strengthen the belief that, if given in suitable cases, in urethane, sulphonal, and paraldehyde we have three most useful and valuable drugs.

MEDICINE.

CONVULSIONS A CAUSE OF CEREBRAL HÆMORRHAGE.

Henry Ashby, M. D., of Manchester, England, in an interesting article in the June number of the *Practitioner*, takes the position that paralysis following convulsions, in the early years of life, is quite frequently caused by intracranial hæmorrhage, due to the convulsions. After admitting that the convulsions and hæmorrhage may be both due to the same cause, as in softening from tuberculous meningitis and arteritis, he goes on to say that in many cases this causation is not present, and in at least a part of these the convulsion is the direct cause of the hæmorrhage. If the paralysis persists after a convulsion, or very slowly disappears, hæmorrhage is to be suspected. The paralyzed limb usually becomes stiff, and epilepsy is by no means an infrequent result. Goodhart, Algel, Money and Oster, have expressed a similar opinion as to the causal relationship between the convulsions and the hæmorrhage, but most authors do not concede it. In support of his views the writer reports a case which had come under his notice, as follows:

G. L., aged twelve, suffering from tuberculosis and hemiplegia, was brought to the Children's Hospital, Manchester. He was quite healthy and well developed until two years of age. There was no history of hereditary syphilis. At two years of age he had a fit, and two weeks later a more severe one. After this his right arm was useless, and he dragged his right leg. The convulsion had been most marked on the right side. The fits continued at intervals from this time until two years ago, since which time they have not occurred. From two to ten years of age they averaged about two a week. They were mostly right-sided. Arm and leg improved slowly after the second fit, but have remained more or less stiff and rigid. The approach of a fit was indicated by a commencement of twitching in the thumb of the right hand. His right leg still dragged at the time of examination, and the arm and leg were stiff and rigid.

He died of tuberculosis, and at the autopsy a half dozen or more old cysts, with brownish contents, were found in the white substance of the hemispheres, the chief of

which was found in the white substance of the left lobe, between the arm centre of the cortex and the internal capsule. They were evidently the remains of old hæmorrhages, and the author, we think rightfully attributes them to the convulsive seizures. The author also says the case is of interest, as showing a condition which could not have been remedied by operation.—*Cinn. Lancet and Clinic.*

RETENTION OF URINE.

In a case of retention of urine in a boy, ten years of age, who had been under treatment nine days for relief of an obstruction of the bowels caused by fæcal impaction in the cæcum, I found it impossible to practise catheterization, on account of the extreme timidity of the patient; and attempting chloroform anæsthesia, was forced to desist, as he ceased breathing on the slightest approach of insensibility. Having a four per cent. solution of cocaine with me, I injected forty minims into the urethra, compressing the meatus for about five minutes, and then requesting him to make an effort at micturition; he did so with perfect ease, and at each subsequent requirement the same proceeding was employed, until the necessity for its use was overcome. Its use produced no unpleasant effects, and it proved a happy factor in overcoming a very troublesome complication. As no opium was being used in the treatment, the retention was plainly from reflex irritation, causing spasm in the membranous portion of the tract.

GEORGE C. IRWIN, M. D.
—*Archives Pædiatrics.*

ILEUS OR INTESTINAL OBSTRUCTION.

The diagnosis of ileus presents many difficulties, first as to its differentiation from peritonitis, and then as to the classification of the different varieties of ileus in regard to locality and nature of the obstruction. Opium is an appropriate remedy in the beginning of ileus as well as in peritonitis, although, of course, for the former affection operative procedures are the last resort.

Ileus may be due to a variety of conditions. They are: First, strangulation from adhesions, from gluing together of coils of intestines, or from diverticula; second, invaginated and longitudinal twisting; third, there are strictures produced by tumors, scars and foreign bodies, which get caught in strictures.

Of the above conditions, invagination is the one easiest diagnosticated. It is characterized by palpable tumor, tenesmus and bloody stools.

Wahl has pointed out that in strangulation and longitudinal twisting of the gut, we may distinguish resisting inflated intestinal coils at the site of obstruction, provided there is not too much meteorism present.

If there has been previous perityphlitis, peritonitis or strangulated hernia, we may expect to find constricting bands. Again, the presence of a stricture or chronic constipation are valuable factors in the forming of our diagnosis.

In determining whether the site of obstruction is in the small or the large intestine, the following is a valuable though not infallible rule; the higher up the point of obstruction is located, the sooner and the more violent will the vomiting be.

From a therapeutic standpoint, it is advantageous to make two groups of ileus cases.

1. Strangulation-ileus, produced by strangulation by bands of internal hernia, by invagination, or by twisting. In this group, the circulation of the gut sooner or later becomes obstructed, and there is danger of gangrene and perforated peritonitis.

2. Obturation-ileus. In this variety the bowel is simply choked up; the affection is less dangerous, more chronic in character. The part of the intestines above the site of obstruction gradually fills up. Vomiting, therefore, does not occur until later on. Patients suffering from this kind of ileus do not suffer from the shock and collapse present in the first variety. When, finally, the bowel gets filled up, inflation and vomiting make the differentiation of obturation from strangulation-ileus more difficult.

The occurrence of peritonitis symptoms are very disagreeable and unfavorable. They consist, usually, of great tympanites, rapid pulse and speedy death.

If it were possible to always distinguish the two above described groups of ileus, we could form a clearer view as to the proper treatment of each particular case.

In obturation ileus, it is proper to rely at first on internal medicine. Begin with opium. Then wash out the stomach and bowels. Eventually resort to puncture of the intestines. These remedies usually succeed. Opium quiets pain and peristalsis, and in this respect it is an admirable drug. But we must remember that it also obscures the symptoms of the disease. Stomach washing, no doubt, does good by clearing out the upper intestinal tube, thus easing the patient; sometimes relieving the obstruction. Puncture is sometimes useful, though not as free

from danger as represented. The injection of water high into the bowel is a very valuable measure. It softens the fæces, and may wash away hard obstructing masses. It may also untwist a loosely twisted intestine. Warm water enemata are borne better and occasion less tenesmus than cold water enemata.

Absolutely no food should be given by the mouth. Ice water the patient may drink to quench his thirst, and nutrient enemata must nourish him. Under the foregoing treatment we can wait quite a while.

After a time there comes a state of intoxication due to absorption of the foul contents of the intestines, and there is then also danger that the bowel, weakened by over distention, will perforate.

In strangulation-ileus the therapeutic requirements are altogether different. The circulation of the bowel is interfered with, and the fearful consequences of this condition must induce us to do early laparotomy, whenever our diagnosis is certain. Exactly when to operate depends on the peculiarity of each particular case. In the case of ileus with acute symptoms, fæcal vomiting and shock, if there are scars on the abdomen, pointing to a previous operation, or if inflated coils of intestine can be distinguished, we must never wait longer than 72 hours before operating.

We may conclude, therefore:

In the beginning of ileus we should first give internal medicine a trial, in the meantime trying to perfect our diagnosis as to the actual anatomical condition. If no improvement occurs in two or three days, operate. If the subjective symptoms improve, while the objective symptoms get worse, stop the opium. If the patient then gets worse, operate.

The operation for ileus is much more dangerous than ordinary exploratory laparotomy. This is because the condition of the patient is bad, the intestines protrudes from the incision, and much time is lost in looking for the point of obstruction.

To cleanse the peritoneal cavity, only a salt solution and sterilized gauze mops should be employed. Antiseptics are dangerous.

Statistics are unreliable, as only the favorable cases are usually reported.—*Deut. Med. Zeit.*

THE ETIOLOGY OF CHEYNE-STOKES RESPIRATION.

Dr. M. A. Boyd read a paper on the etiology of Cheyne-Stokes' respiration, in which he reviewed all the physiological explanations of this phenomenon offered by writers on the subject since Stokes' time to the present day. He particularly pointed out the very rational explanations offered by Traube and Filehene, who regarded the respiratory derangement from the altered nutrition of the respiratory-centre point of view; and of those of the Dublin School, including Hayden and Little, who regarded it primarily from the cardiac point of view, and complimented the Dublin School as offering by far the best evidence, both clinically and pathologically, in explanation of the phenomenon. Having alluded to the marked rhythmical irregularities between the heart pulse and respirations in this affection, Dr. Boyd drew attention to a point which heretofore in the literature of the subject, so far as he was aware, had not been previously alluded to—namely, that the latter portion of the forced respiratory phase of the Cheyne-Stokes' cycle is chiefly an expiratory one, in contrast to the first portion of it, which is an inspiratory one; and that this forced expiration had a most important bearing on the weak ventricles of the heart, by helping them to squeeze the blood on the one side into the pulmonary artery, and on the other into the dilated and inelastic aorta. In proof of this he exhibited sphygmographic tracings showing that it was only during this expiratory portion of the respiration that arterial tension was raised in the arteries, and that this tension continued through the apnœal period following, during which time the respiratory centre was fully supplied with arterial blood and the weak and degenerated left ventricle resting. He regarded the apnœal period, during which time respiration was suspended, as only an effort on the part of the higher automatic centres to rest a heart the ventricle of which is either too feeble to charge an arterial system, the aorta of which may be dilated and inelastic, or the vaso-motor control of which may be defective, and whose own blood supply may be rendered insufficient in consequence, and its nutrition enfeebled. After the intrinsic muscle of the heart has been fed by this increased arterial tension of the expiratory and apnœal periods, forced inspirations begin again, and the heart contractions are stronger, but they fail to fill the dilated aorta, until the forced expirations, by making pressure on the ventricles, come to their aid again. The most typical and pronounced forms of Cheyne-Stokes' respiration were to be met with in alterations of the heart and aorta produced by degeneration and disease. The

form of it met with in cerebral disease or injury, and in apoplexy and uræmic coma, without any primary engagement of the heart, he regarded as due to direct interference with the respiratory centre in the medulla, either by pressure or poisoned blood, and the phases of it were never so well marked as in those cases of the affection depending primarily on alterations in the heart. Owing to its dual origin in this way comes the differences of opinion as regards its pathology. As regards its treatment, Dr. Boyd found so much improvement following the inhalation of oxygen in all the cases where disease or degeneration of the heart produced it, that he urged a trial of this remedy in all such cases, and ventured to suggest, from his experience of the remedy, it should be tried not alone in this affection, but in all cases where degeneration of the heart existed from any other cause.—*Lancet.*

SURGERY.

ON THE TREATMENT OF CHRONIC INDOLENT ULCERS.

Chronic ulcers are generally situated over the tibia, about the middle or lower third of the inner aspect of the leg. They are "callous" ulcers, with thick, hardened, almost cartilaginous borders and edges, with a sunken, pale and dusky base; there is absence of florid granulation, and the secretion is then and often offensive. The indications for treatment of these ulcers, whose vitality has always been greatly compromised by chronic inflammation, are the following: To subdue inflammation and stimulate the cells of the part to new activity; to restore the normal circulation; to soften the indurated tissues which oppose cicatrization; to combat and destroy micro-organisms, which luxuriate in the part and keep up inflammation and necrosis; to remedy any existing dyscrasia, and fortify the constitution of the patient.

We shall not presume, in an article which must be brief, to take up these indications in their order; any mode of treatment to be successful must aim to more or less meet them all. Sometimes granulation action is best promoted by stimulating astringent and antiseptic lotions, such as the *red wash* (sulphate of zinc, two grains; rose water, one ounce,) *liquor acidi carbolici* (a two per cent. solution,) the *lotio nigra*, solutions of salicylic acid (one drachm to the pint, of tincture of myrrh (one drachm to four ounces of water,) of nitric acid (one drop to the ounce of water,) etc. "In a healthy sore," says Dr. W. Alexander, "where there is no mechanical obstruction to cicatrizations, the lotion most rapid in producing the desired effect is chloride of zinc." An antiseptic chloral lotion (chloral, one drachm; water, four ounces) is highly commended by Dr. Dowse, of London.

In many cases which are not too far advanced, the mere fact of keeping out offensive microbes will often cause a healing process to start; here the use of a corrosive sublimate lotion, of dry calomel, as a local application, or simply dusting the sore with iodoform, and covering with antiseptic gauze and a simple roller, will be at once attended with the formation of healthy granulations and a contraction of the margins of the ulcer.

Should indolent ulcers ever be poulticed? Theoretically, poultices might be expected to fulfil several important indications, and instances will repeatedly occur when they will prove beneficial. Sometimes the indolent ulcer is irritable and needs soothing, and a linseed poultice is the best application; and always where it is desirable to produce active determination of blood to the part, and increase the formation of vessels and cells, poultices may advantageously be used, though the continuous warm bath, as recommended by Billroth, is even better. We thereby obtain an artificial swelling and softening of the dry, hardened borders of the ulcer. Zeis, who has often employed the warm-water bath in callous ulcers of the leg, also recommends this treatment as one of the most efficacious in such cases.[1]

The indolent ulcer generally refuses to heal on account of mechanical obstacles to cicatrization; the blood-vessels of the part are distended and toneless, if not atheromatous; the tissues are œdematous and swollen; the veins, it may be, are varicose. Here pressure judiciously applied is the indispensable means of cure. In all text-books a prominent place is given to a system of strapping, first devised by Baynton in the latter part of the last century; the adhesive strips are cut from an inch to an inch and a-half in width, and long enough to extend about three-fourths around the limb, each band being so arranged as to overlap that which is below it, and drawn so firmly as to afford uniform support to the affected surface.

It was found that serious disadvantages attended this mode of treatment. The dressings had to be frequently removed, otherwise the pent-up discharge became very offensive. Dr. J. Gordon Black several years ago pro-

[1] Billroth, "Surg. Path.," p. 399.

posed a modification of the Baynton dressing, which has been quite successful; certainly, for varicose ulcers, no treatment could be better. For plaster, he uses the *emplastrum saponis.* This is first warmed by being passed through hot carbolic-water. "The sore, after being washed clean by the patient, is then saturated with weak solution of carbolic acid and the straps applied. The pieces of plaster should be two inches broad, and long enough to overlap four inches after passing completely around the limb. They should be applied after the manner of a 'Scot's dressing,' from about three inches below the lowest diseased surface to about the same distance above the highest. In their adjustment it is important to use no compression, but simply to lay them down evenly, so as to fit the limb accurately, and leave no creases in the plaster. Should pain be produced, the strap has been improperly applied, and should be at once removed. The bandaging of the limb lightly and carefully from the toes to the knee finishes the dressing. The patient may be told to return at the end of a week, when, on removal, the plaster will show only a slight moisture, instead of the profuse and offensive discharge seen when no antiseptic is used."[1]

Under this treatment, says Dr. Black, the horny edges of the callous variety quickly disappear, without recourse to such a dangerous excitant as blistering (a method recommended by Home, Cooper, and other of the older surgeons). In eight or ten dressings, even very extensive ulcers may be healed by strapping.

Mr. Nourse, a surgeon of Brighton, reports great success from strapping and bandaging, according to this method.[2]

On this principle (that of keeping up uniform pressure) it has been proposed to treat indolent ulcers by means of sheet leads, as in the plan described by Dr. Atkinson in the *Practitioner*, May 1879. A piece of sheet lead is moulded to the leg, and kept on by an ordinary calico bandage. The size of the lead should be sufficient to cover the sore completely and lap a little over the whole skin; the edges and angles should be well rounded, so as not to chafe and irritate; it should be about an eighth of an inch in thickness, and moulded very accurately to the shape of the leg, so as to allow of no indent being apparent on the surface. After it has been carefully fitted the leg should be carefully bandaged from the toes upward. The ulcer is uncovered night and morning, and a little weak sublimate water allowed to trickle over it.

Dr. Watson, in the *Boston Medical and Surgical Journal,* utilizes sheet tin for the same purpose. The dressing is known at the Boston City Hospital as the "tin dressing," and its method of application is as follows: The ulcer and surrounding surface are soaked in corrosive sublimate, 1 part to 4000, and thoroughly cleaned. A bit of protective is then placed on the surface of the ulcer, extending a little beyond the margins of the ulcer; oiled silk will answer the purpose. The tin, made to fit the surface on which it is to lie, is then placed on the protective, and the whole, as well as the surrounding tissues, covered with a dry corrosive sublimate gauze dressing, which is held in place by an evenly applied bandage, extending from the toes to the knee. Ulcers which have been for a long time lagging, will often take a fresh start under this dressing.[1]

The treatment of indolent ulcers, and especially varicose ulcers, by the Martin rubber bandage, deserves mention, as being a very popular and very successful method. This treatment consists in applying a solid rubber bandage to the limb affected before the patient gets out of bed in the morning. It is not necessary that there should be any application between the ulcer and the bandage. The bandage is put on with just the requisite degree of tightness to prevent its slipping down. It is kept on all day, and only taken off at night on going to bed, when it is washed in warm water and hung up to dry. The ulcer is then covered with some simple dressing, which is kept in contact by a few turns of an ordinary roller.

Since the publication, about fifteen years ago, of Dr. Martin's memoir, "On the India-Rubber Bandage for Ulcers and other Diseases of the Legs," this mode of treatment has come into very general use everywhere, and a whole volume could be published made up of clinical reports and articles that have appeared on this subject alone. Surgeons like Clutton, of St. Thomas's Hospital, are enthusiastic in their praises of this mode of obtaining a uniform curative pressure; it is, says Clutton, "the best method yet devised of applying an old therapeutic principle." It is, of course, understood that this treatment is adapted to simple rather than specific ulcers; a syphilitic sore will demand the specific treatment in addition to the local.

[1] "Braithwaite's Retrospect," Part lxviii. p. 195.

[2] *Brit. Med. Journ.*, May 31, 1873.

[1] *Medical News*, October 15, 1887.

But there are chronic ulcers which cannot be made to heal by any amount of strapping or bandaging; here multiple incisions have been recommended, by Dr. F. Spaeth, in the *Practitioner*, May, 1888. This writer affirms that the lateral incisions and the circular incisions around the margin, recommended by Weber and Nussbaum, have generally proved unsuccessful. (This has also been the experience of Billroth, Verneuil, Nélation and others.) His method is more radical still. The entire ulcer is divided lengthwise by a deep incision, extending far into the healthy tissue. Cross incisions are then made through the callous tissue into the healthy at intervals of about three-quarters of an inch. The incisions must go through not only the skin, but the underlying fascia; the wounds must gape widely. The bleeding, often profuse, must be stopped with tampons; and the whole wound is then done up with iodoform dressings. "When, after eight to fourteen days," says Dr. Spaeth, "the dressing is changed, the difference in appearance is very marked. Healthy granulations are springing up in abundance from the gaping incisions, and soon cover the whole surface, reaching the level of the surrounding skin, from which the growth of new epidermis is seen to advance rapidly. . . . The advantage of this method is that highly vascular healthy parts are enlisted in the healing process of granulation, and thus not only the wound but the resulting cicatrix are under more favorable conditions. It might be expected, and facts confirm the expectation, that this cicatrix is far stronger and more resistant than the thin covering which may occasionally be obtained from scanty granulations, after the use, perhaps, of every means in the surgeon's armamentarium, and with great difficulty at that."

We have only space to mention without comment an ingenious device of Dr. Philip Cowan, which he calls "A New Method of treating Ulcers," and which is based on the fact that an ulcer is "a local asthenia of the skin and parts beneath," "a local tendency to degeneration and death." Availing himself of the property of absorption inherent in ulcerated surfaces, he would *feed the ulcer* with such nutrient substances as eggs and milk and flour, applied in the form of a paste to the part. He claims that his theoretical provisions have been proved to be scientifically well established by the results of practice, and gives reports of eighteen cases where the ulcers were "fed" till cured.[1]

Skin-grafting was introduced in 1869 by Reverdin, of Paris. It has proved to be a most valuable means of cure in many cases. The grafts are generally taken from the anterior aspect of the forearm, and include only the cuticle, with the rete mucosum and the apices of the papillæ. The grafts are placed about half an inch apart, and are confined by pieces of gutta-percha tissue and strips of plaster. With due care, it is quite easy to get a number to take, and thus there are provided "new centres of cutification," which also have the power of exciting cicatrization at the margin. Brilliant results have been obtained by this mode of treatment, which ought always to be tried in bad, intractable cases.

The constitutional treatment of indolent ulcers must be adapted to the cachexia accompanying or producing them. Some patients need only a general tonic and reconstituent treatment; others are gouty, tuberculous, or syphilitic, and demand the proper remedies for those dyscrasiæ. He will have the best success in treating chronic ulcers who best masters the various etiological factors concerned in their production.—*Therap. Gaz.*

GYNÆCOLOGY.

CASE OF HÆMOGLOBINÆMIA AND HÆMOGLOBINURIA FOLLOWING INTRAUTERINE USE OF CARBOLIC ACID.

Richard Krukenberg reports the case of a woman, twenty-eight years old, who had borne three children and was under observation for threatened abortion. After a chill, an embryo of two months and part of the membranes were cast off. The patient was pale, completely conscious and without special complaint. The pulse was 96 and regular, respiration not accelerated; the heart showed signs of a compensated mitral insufficiency. Chloroform was given, and the uterus curetted; about one and a half tablespoonfuls of membranes were removed, one little piece being greenish-gray. The uterus was then washed out with a 2.7 per cent. solution of carbolic acid, Olshausen's modification of Bozeman's catheter being used. The eyes of the catheter became

[1] "Braithwaite's Retrospect," Part lxvii. p. 167.

plugged with particles of tissue. About one quart and a quarter of the fluid was injected, when the pulse became small, and then ceased. The douching was immediately stopped, the uterus expressed bimanually, and the woman, who was pale and cyanotic, placed horizontally. The pulse, when it returned beat 100–112 per minute, two strong beats being followed by a weak one. Artificial respiration was necessary. The pupils were small and did not react; the extremities were flaccid, without tremor or spasm. The lungs become œdematous. After the deep coma had lasted two hours, it yielded gradually to the employment of powerful analeptics and irritants to the skin; but the intellect remained clouded. The patient muttered unintelligibly, was restless, breathed stertorously, and presented a pale, cyanotic face, covered with cold sweat. Two hours after the douching the bladder was emptied of five fluid-ounces of urine, dark blood-red in color, resembling raspberry juice. It smelled of carbolic acid, and after being filtered had a specific gravity of 1021. The fluid contained albumin, peptone, and 0.262 per cent. carbolic acid, estimated as tribromphenol in the acidulated distillate of the urine. The normal quantity of carbolic acid in the urine, according to J. Munk, is 0.0034 per cent. Spectroscopic examination demonstrated the presence of oxyhæmoglobin, with characteristic absorption bands in yellow and green. The reaction of the fresh urine was acid, the specific gravity when unfiltered, 1024. On boiling, and with addition of acetic acid, there was a blackish-brown precipitate, which after standing a day filled one-third of the glass. Hæmin crystals were obtained from the sediment, and Heller's test for blood gave a positive result. The sediment also contained red blood-cells, epithelium, no casts, but golden-yellow clumps, partly firmly granular and partly homogeneous.

About four hours after the abortion the patient regained consciousness, complained of great weakness, and with difficulty expectorated a profuse, frothy mucus. During the night she had a brown stool, and urine involuntarily passed. She was delirious, and so restless that the moist pack ordered for her had to be removed. Toward daybreak it was noticed that she was very much jaundiced. The urine (one-half to three-quarters of a quart) was raspberry-colored, but unfortunately was thrown away. On the following day, the temperature was 98°, the pulse 110; there was sensitiveness over both kidneys and the spleen; the spleen was enlarged. The patient complained of headache, great weariness, loss of appetite, and frequent desire to urinate, with pain on micturition. A day later considerable swelling of the liver was detected. The jaundice continued, with the diffuse catarrh of both lungs. There were slight chills. The jaundice slowly disappeared, the catarrh persisted, the swelling of the spleen increased, while signs of peritonitis and of œdema were entirely absent. The urine contained a few red and numerous white blood-cells, much-clouded kidney epithelium, very few epithelial casts, but extraordinarily numerous and large hæmoglobin cylinders, yellowish-red to golden-brown in color. The patient died in coma, following a uræmic attack. The highest temperature observed was 102.1°. The pulse shortly before death remained under 100.

The following symptoms were prominent: 1. Oliguria (seven ounces of urine in twenty-four hours as the maximum), which increased almost to complete anuria. 2. Complete anorexia; violent vomiting, which made nourishing in the usual way impossible; the vomitus smelled decidedly ammoniacal. 3. Brownish, scanty discharge of foul odor from the vagina.

The autopsy confirmed the clinical diagnosis. The author reviews other cases that have been reported, and expresses the opinion that the symptoms produced were due to a specific toxic action of the carbolic acid, which decomposes the hæmoglobin and the red blood-cells. Krukenberg, nevertheless, concludes that when the necessary precautions are used, carbolic acid is the most serviceable intra-uterine antiseptic, and the one to be preferred to all others.—*Zeitschrift für Geburtshülfe und Gynäkologie*, Bd. xxi., Heft 1.—*News.*

UTERINE CURETTE AND ANÆSTHETICS.

Dr. Geiel (*Nouvelles Archives d' Obstet. et de Gynœcol.*,) does not consider that chloroform is necessary, or even advisable, for the operation of scraping the endometrium in cases of endometritis. He maintains that the proceeding is absolutely safe, providing that the manipulations are skilful, and adequate precautions against sepsis be taken. Cicatrices and atresia of the cervix need never occur, and hæmorrhage should cease directly the operation is performed. Dr. Geiel dilates the cervix with a tupelo tent. Within thirty-six hours the patient will be ready for the curette. The use of that instrument causes but little pain, and the little which it does cause is necessary for the

detection of the most diseased spots on the endometrium. The patient is placed in the correct position and the tender spots are marked out by the touch of the sound. Then a twenty per cent. solution of hydrochlorate of cocaine is applied to the most tender parts, while the remainder of the uterine cavity is painted with a ten per cent. solution of the same compound. The anterior lip of the os is then seized by means of a volsella, and held by an assistant, so as to keep the uterus fixed and well drawn down during the operation. The endometrium is dried with wool and then carefully scraped, especially at the tender points. The characteristic grating sound (*cri utérin*) should be heard over every part subjected to the curette, as it indicates that the diseased material has been thoroughly scraped away. Lastly, the uterus is washed out with a 0.05 per cent. sublimate solution. This washing is better than swabbing (*ecouvillonage*). The after treatment consists in the administration of antiseptic vaginal injections, and in the introduction of iodoform-glycerine tampons. With the above precautions the curette may be safely used in cases of pure endometritis.

OBSTETRICS.

A CASE RELATING TO THE INFLUENCE OF MATERNAL IMPRESSIONS UPON THE FŒTUS.

Dr. R. Osgood Mason, in an article in the *Medical Record*, affords some interesting reading: The *Record* for May 18, 1889, contained a communication from me intended to show that physicians and others, who believe that strong impressions made upon the mother during pregnancy may have an influence upon the fœtus *in utero*, even to the extent of causing marked physical changes, need not necessarily be believers in *witch broth* and such like supernatural things, but may be well-informed, thoughtful, and even scientific people. While preparing that communication a newspaper item fell under my observation referring to a family of albino children in Harrisburg, Pa., presenting some interesting features bearing upon the subject in hand, and having the authority of the attending physician, Dr. M. K. Bowers, of the same city. I at once wrote to the doctor in regard to the matter; he kindly replied, and I found in him a most interested and intelligent observer and correspondent.

The following facts were elicited which, with the doctor's permission, I have prepared for publication.

Two years ago, when our correspondence commenced, the family referred to consisted of father, mother, and three albino children. The father of the children is a very dark-skinned man with black eyes and jet-black hair; the mother is not quite so dark, but has dark hair and dark-blue eyes. The grandparents all have dark complexions and dark hair, and the family, as far back as its history can be traced, is entirely free from freaks or abnormalities of any kind.

Two years previous to the birth of the first albino the mother gave birth to a perfectly normal, healthy child having dark eyes and very black hair. This child died just previous to her next pregnancy.

With the second pregnancy everything went on as usual until near the beginning of the second month, when one day she unexpectedly received a small box by express from a friend in Philadelphia. She was quite ignorant of the contents of the box, which, however, was at once opened in her presence and was found to contain a large, handsome, perfect albino rat. As soon as she saw it she became nervous and declared that the sudden impression made upon her would show itself upon her child.

The rat, however, was tame, and was at once domiciled in the house. It became a general pet in the family, the pregnant woman herself also becoming very fond of it, often playing with it and holding it in her hands. A short time before her confinement the rat was accidentally killed, an incident which caused her considerable annoyance and sorrow.

A few days later the doctor was called to the confinement, which resulted in the birth of a fine boy baby, but a perfect albino. The mother, when informed of the fact, did not seem at all surprised, but said at once, "I knew it, I told you so. It was the rat—oh, that rat!" However the boy grew beautifully and became a great pet both at home and abroad, "the mother herself becoming *wonderfully* attached to him."

The mother soon became pregnant again, and informing the doctor of the fact, she remarked that she had made up her mind to have a pair of albinos. Her expectations were realized, and in due time she was delivered of a fine girl baby, also a perfect albino.

Upon the occurrence of her next pregnancy she remarked that this ought to be a black-haired baby, but she feared she would

be disappointed. Her fears proved well-founded, and her pregnancy resulted in another perfect albino girl.

So, dating from the white rat episode, we have three perfect albino children, concerning whom the doctor writes: "The children are remarkable for their health, never having been sick, general activity, and unusual intelligence. They are much better specimens of the albino type than any found in museums or circus shows. They have snow white hair, eyebrows, and lashes, the hair being remarkably fine and soft. The eyes are extremely sensitive to light, and when exposed to the sunlight or a bright artificial light they keep them closed; but in a subdued light or on a cloudy day, they are wide awake and have very acute vision, being able to see the smallest objects, even when the room is quite dark. The sclerotic is of a dull white, a distinct bright pink (almost red) line binding its juncture with the cornea, the pupil is of a slightly darker shade of pink. The eyes are constantly in motion, never resting more than a moment upon any one object. The two older children are extremely bright and active, and the new-comer, now four days old, promises to rival her distinguished brother and sister. She is an unusually fine baby."

Such was the state of affairs in the albino family in May, two years ago.

During the second week of April last I received another letter from Dr. Bowers, from which I gather the following interesting facts. The albino children were all living and in excellent health; furthermore, on Sunday morning, April 5th, the doctor was again called to attend the mother in her confinement, when she gave birth to a perfect and vigorous twelve pound boy, with black hair and dark-blue eyes, as utterly unlike the albinos as it was possible to imagine. The three former children are, if possible, more pronounced albinos than they were two years ago, and the family, as at present constituted, presents a most singular and interesting group.

The doctor then goes on to say: "This last dark-haired, normal child appears to be a striking example of will-power exerted by the mother. She has been under my care continually, and I know that it has been her one chief desire to have such a child. She was exceedingly anxious to become pregnant, and when she was convinced that such was the case she sent for me, and during our conversation made this remark: 'Now, doctor, keep your eye on me, for I am sure it is all right, and this time it will be a black-head!' She at once sent her albino children away to her mother's house, to remain during her pregnancy, and the husband tells me that her one constant song and desire was for the dark-haired baby. She talked of it constantly, she even talked of it in her sleep." When called to attend her she at once said to the doctor, "Now I am ready for my dark baby."

The doctor remarked that the desire on the part of his patient for a dark-haired child was not merely the whim of an ignorant or illiterate person; on the contrary, she was well educated, generally intelligent, and an unusually brilliant woman. Her parents were educated people—her father at present holding a prominent position in one of the offices of the State Government—and that her desire was accompanied by a very strong faith and intelligent effort for its fulfilment.

The case is simply one, and a strong one, bearing on the question of the possible effect of maternal impressions upon the fœtus *in utero*.

The case sums up as follows: Parents both dark—one *very* dark, to whom is born, as might naturally be expected, a dark-complexioned child.

Early in the second pregnancy of the mother she is surprised and made nervous by the sudden and unexpected appearance in her family of a large, handsome albino rat. She affirms that it will have an effect upon her unborn child.

Albino number one is born. She becomes exceedingly fond of it; its peculiar face is ever before her. She is not averse to another similar child, but desires it.

Albino number two is born. The next pregnancy she hopes may terminate by the birth of a dark-haired child; but she is surrounded by the same influences, and the same models are before her. She fears disappointment, and she experiences it.

A third albino child is born. Upon the occurrence of her next pregnancy she is thoroughly aroused, and is influenced by a peculiarly strong wish for a dark-haired child. She affirms that it will be so. She exerts her will to promote her wish. She removes from her sight the models which she does not wish should influence her. She directs her mind constantly to the ideal of a dark-haired child. She dreams of her dark-haired child and speaks of it in her sleep—an important fact as indicating unusual susceptibility to impressions. She feels that she will not be disappointed, and she is not. A perfect dark-haired child is born.

The "coincidence" man is abroad, but he

has a sallow and antiquated look, and along with his friend, the "unconscious muscular action" man, seems to belong more properly to the early part of the century. Experimental psychology is bringing to light many important facts showing mind producing physical effects beyond the limit of actual nerve supply. Why not in cases like that above cited? I think we have occasion to thank Dr. Bowers for his interesting case in point.

PÆDIATRICS.

RARE COMPLICATIONS IN DIPHTHERIA.

Dr. Julius Schwalbe, in an interesting article on the above subject, appearing in the *Deutsche Med. Wochenschrift* but recently, the following case, among others, is cited. A male child, two and one half years old, had had tracheotomy performed, on account of diphtheritic laryngitis. On the fourth day following the operation, the wound became diphtheritic, and three days later a hæmorrhage of the wound occurred, which proved uncontrollable. The subsequent autopsy revealed no satisfactory cause for the hæmorrhage, other than a possible gangrenous process effecting the vessels in the immediate vicinity of the wound.

Among the histories of 2500 cases of diphtheria occurring in the Friedrichshain Hospital, Dr. Schwalbe was only able to find the records of three similar cases, and in these, as in his case, the source of the hæmorrhage could not be satisfactorily determined. The following is another case of hæmorrhage. The patient was a boy nearly four years old, who, five days after the performance of tracheotomy, while confined to his bed, was suddenly seized with a most violent hæmorrhage from the trachea. The little patient, who as it was, was very anæmic, was at once raised up by his feet and energetically shaken. At the opening of the tube a bit of false membrane made its appearance, which, upon removal, proved to be a cast of the bronchi, considerably ramified. Upon the removal of this membrane, the hæmorrhage ceased as suddenly as it had appeared. Schwalbe is of the opinion that in this case the hæmorrhage was probably caused by a rupture of numerous superficial capillaries, due to the forcible expulsion of the membrane.

Schwalbe has compiled the following table illustrative of the various causes of hæmorrhages consecutive to diphtheria.

A. *External Hæmorrhages*:

1. In gangrene of the nose and pharynx—*Cause*, general septic process, and narcotic degeneration of the parenchyma.

2. In diphtheritic infiltration of the tracheotomy wound—*Cause*, a continuation and spreading of the necrotic process to the neighboring vessels; or,

3. In consequence of a rupture of some vessel in the immediate vicinity of the tracheotomy wound (the ætiology of this theory is uncertain.)

4. In consequence of a rupture of some vessel by the canula.

B. *Internal Hæmorrhages* from the tracheal or bronchial mucous membrane.

1. In consequence of a decubital ulcer.

2. In consequence of an opening of the vessels, due to the removal of the diphtheritic membrane; especially probable in cases where a hyperæmic condition of the lungs exists.

3. In consequence of simple hyperæmia of the lungs (especially after bronchitis fibrinosa.)

In a second portion of his article, Dr. Schwalbe also cites cases illustrating other unusual complications in diphtheria, among which may be mentioned emphysema of the skin with sub-pleural emphysema, and double pneumo-thorax.

NEW METHOD OF TREATING GRANULAR CONJUNCTIVITIS IN CHILDREN.

Sattler's method (*Journ. de Méd.*) consists in everting the upper lid, as is usually done, and then by means of a special form of forceps seizing it so as to completely disclose the conjunctival cul-de-sac. The mucous membrane should then be deeply scarified, after which the submucous tissue should be thoroughly curetted in order to remove all colonies of microbes which may be there. The wound is then to be washed with a one to five hundred solution of sublimate.

Abadie has used this method in many cases with excellent results. In place of a steel curette he employs a nail-brush with very short and stiff bristles. The mucous membrane having been lacerated, he then rubs it briskly with the brush dipped in the one to five hundred solution of sublimate. For a few days afterwards he subjects the lids to eversion and washing with the sublimate solution. Many cases were cured by this method which had long been treated unsuccessfully with cauterization of sulphate of copper.

Trousseau, in criticising this method, fears that the curetting might be followed by entropium and trichiasis with retractile scars.—*Archives Pædiatrics.*

HYGIENE.

THE INFLUENCE OF TOBACCO UPON THE DIGESTIVE FUNCTIONS OF THE STOMACH.

Dr. Ydam Pouchkine, of Russia, has recently concluded an interesting series of experiments relative to the influence of tobacco upon the digestive functions of the stomach, as well as upon the acidity of the urine. His experiments were made upon seven different subjects, all in robust health, and none of whom were addicted to the habitual use of tobacco in any form. At first the effect of tobacco upon the gastric juices was observed, especially in regard to the motive power of the stomach, and also its absorptive power.

In each case, for three days, the author carefully examined the gastric juices of his subjects by the known methods, its motility by salol—according to Ewald's method—and its absorptive power by Zweigel's method with the iodide of potassium.

After this, the second portion of the experiment was carried out, and again, for three consecutive days the various functions of the stomach accurately tested; only during this second period each subject smoked twenty-five cigarettes a day.

From the results of these experiments, Pouchkine is enabled to draw the following conclusions:

1. Tobacco increases the quantity of the gastric juice, while it diminishes its acidity.
2. The quantity of free hydro-chloric acid in the stomach is materially lessened by the influence of tobacco.
3. In proportion to the diminishing of the quantity of free hydro-chloric acid, the digestive functions of the stomach are also diminished.
4. Tobacco occasions similar symptoms as those caused by the ferments.
5. The modifications of the gastric juice, caused by the use of tobacco, lasts for some time.
6. Both the motility, as well as the absorptive power of the stomach, are increased by tobacco.
7. Tobacco exerts no influence upon the acidity of the urine.—*Wratch.*

EPIDEMIC NEURALGIAS IN AUSTRIA.

For the past thirty years, Professor Benedikt, of Vienna, has been making a careful study of the epidemic supraorbital neuralgias which occur in that city in winter and spring. Usually the symptomatic picture is one of a peripheric neuritis. This year the number of victims has been very large, and the apparent epidemic nature of the disease most manifest. The majority of cases occur among the people living near the banks of the river Donau, or near the river meadows. While the nature of the spread of the disease would seem to indicate its infectious character, it is nevertheless, not infectious; neither is it of a febril origin, nor malarial, for almost without exception it is unaffected by the usual antipyretics, such as quinine, antipyrin, or antifebrin. Again, there is an entire absence of fever, and also of any enlargement of the spleen.

The specific treatment consists in the exhibition of iodine salts, particularly iodide of soda, in doses of one gramme daily. It seems also, that the addition of twice this quantity of salicylate of soda, considerably increases the efficacy of the former drug.

A second specific treatment consists in galvanization. In the peripheric forms of the disease, the one electrode is placed at the back of the neck, and the other over the seat of the trouble. In the excentric forms of the disease the sympathetic nerve is galvanized.

In patients constitutionally faulty, the disease not infrequently assumes a chronic form.—*Wiener Med. Wochenschrift.*

AN EASY METHOD OF FEEDING PER RECTUM.

Mr. Y. M. Jones-Humphreys, L. S. A., writes (*Lancet*, February 14th, 1891): Some months ago, having to treat a bad case of gastric ulcer by rectal feeding, etc., I devised an apparatus consisting of a small funnel, a piece of elastic tubing ½ inch in diameter, 1½ feet long, about 4 inches of glass tubing (by which the descending fluid can be watched), and joined on to this an ordinary flexible catheter. The atmospheric pressure is sufficient to send any fluid into the rectum, and I have never noticed any return of the fluid, absorption being slow but efficient. The instrument is an improvement on the old enema apparatus in use. The claims for this method are: (1) It is extremely simple, the patient being able to pass the catheter into the bowel without ex-

periencing any pain or unpleasantness: (2) It is cheap and easily made: (3) After once being shown, the most inexperienced person can use it, and thus we can be sure our patient will have small quantities of nourishment at frequent intervals: (4) The fluid is slow in its passage, and thus nearly the whole quantity becomes slowly absorbed. In any case requiring rectal feeding, I venture to hope that my professional brethren will find this simple method of use to them, and a source of comfort to their patients.—*Hospital Gazette.*

COFFEE: ITS USE AND ABUSE.

A paper on this subject, by Dr. I. N. Love, concludes as follows:

1. The world has, in the infusion of coffee, one of its most valuable beverages.

2. As a prompt diffusible stimulant, either by the stomach or by injection into the rectum, it is in all cases of shock preferable to alcohol.

3. It is antagonistic to malaria and specially destructive to the typhoid bacillus and cholera germ, and for this reason it is an admirable remedial agent in these conditions, both as a direct stimulant, and antiseptic and an encourager of elimination.

4. One of its chief advantages in health and disease is in the fact that it aids in securing that psychical satisfaction which is conducive to hope, comfort, good digestion, great power of resistance and rapid recuperation.

5. In season, it supports, tides over dangers, helps the appropriative powers of the system, whips up the flagging energies, enhances the endurance, but is in no sense a food, and for these reasons, and many others, it should be used temperately, as should all of nature's benign gifts.

6. In excess, it is even more dangerous than alcohol, for it is not, like the latter, a nutrient, nor is the effect of its excessive use so apparent or disrespectable.—*Annals Hygiene.*

MEDICAL CHEMISTRY.

TESTING FOR SUGAR.

Hunkiarbeyendrian adds salol to the list of substances which impart to urine the property of reducing the oxides of copper, silver and bismuth in alkaline solution. The urine of persons to whom salol has been administered, furnishes, when tested with Fehling's solution, a precipitate of the red oxide of copper, the quantity varying with the amount of salol absorbed. If such urines contain at the same time sugar, the polariscopic test is also subject to error, since urines containing derivatives of salol polarize to the left; the results obtained are therefore too low.

To distinguish, in urine, sugar from the derivatives of salol, the following process is recommended: A tube of the capacity of fifteen cubic centimetres, is half filled with urine previously treated with basic acetate of lead. To this is added five centigrammes of hydrochlorate of phenyl-hydrazin and twenty centigrammes of sodium acetate. The liquid, which assumes a yellow color, is heated in the water-bath to 100° for half an hour, and then allowed to cool, when the precipitate formed is examined microscopically. If due to derivatives of salol, the precipitate is amorphous; if to sugar, it is composed of small, silky crystals of phenylglucosazone, which are at times grouped into tufts.

A more rapid process, which does not require the employment of the microscope, is the following: To 200 cubic centimetres of urine, there is added one gramme of sulphuric acid and about 50 cubic centimetres of ether free from alcohol. The mixture is shaken for several minutes, then allowed to stand awhile. The upper layer, which contains the derivatives of salol, is evaporated in a porcelain capsule, the residue thus obtained dissolved in a little water, and the solution tested with a few drops of a solution of the perchloride or persulphate of iron. A violet coloration is produced in the presence of derivatives of salol. The lower layer of liquid is treated with basic acetate of lead, and, after filtration, tested for sugar by the ordinary methods. Non-saccharine urines containing derivatives of salol, when treated in this manner, have no action on metallic oxides, or on the rays of polarized light.

Jollis considers that a sharp distinction exists between glycotic and diabetic urines. The former contain but mere traces of sugar, about 0.4—0.5 per cent., and otherwise are not characterized by abnormal chemical and physical properties. The diabetic urines, on the other hand, have a high density, a pale-yellow color, a less quantity of uric acid than normal urine, and contain acetone, or aceto-acetic acid, or acetic acid. Sugar usually occurs in them in considerable quantities, although this is not always the case. A new method, namely, to paint a visiting card first with copper sulphate solution, and, after drying, to apply the suspected urine with a

match, dry and heat, which has recently been proposed by von Becker, is considered wholly untrustworthy by the author. Trommer's method, and Seegen's modification of the same, are also considered valueless by the author. Böttger's bismuth re-agent and the phenyl-hydrazine test are found by him to be trustworthy. With Böttger's bismuth re-agent, 0.08 per cent. of sugar may be detected, and if the urine be first boiled with a solution of sodium chloride the delicacy is heightened, 0:01 per cent. being then detectable. At least fifty cubic centimetres of urine must be employed to five cubit centimetres of Nylander's re-agent, and should not be boiled for more than two minutes. The presence of such substances as rhubarb, kairine, oil of turpentine, quinine, arsenious and salicylic acids, sulphur, mercury salts and iodides, should be avoided. In the case of considerable quantities of uric acid, it is to be observed that the brown coloration produced by it remains constant, whereas that produced by the presence of sugar becomes continually darker. The phenyl-hydrazine test enables 0.015—0.038 per cent, of sugar to be detected, the delicacy being the greater, the less the amount of reducible substances present. At the same time crystals, very similar to those of phenyl-glucosazone, are formed with glycuronic acid. The latter are, however, not so fine, and have not the same striated arrangement as those of phenyl-glucosazone.

Hirschl considers the phenyl-hydrazine test a perfectly trustworthy one. If the urine gives typical needles of phenyl-glucosazone, it certainly contains glucose. It is essential, however, that the test-tube should be allowed to remain one hour in the water-bath. If this is done, the precipitate caused by glycuronic acid, if this substance is present, it is wholly amorphous, and easily distinguishable from phenyl-glucosazone. Levulose cannot be distinguished from dextrose by this test, but only by the polarimeter. Lactose, which has been found in the urine of nursing women, furnishes needle-shaped crystals, which are about ten times the width of those of phenyl-glucosazone, and do not show the same orderly arrangement. Their melting point is 200°. Maltose gives a precipitate, which occurs in yellow tables, melting at 82°.—*Boston Med. Surg. Jour.*

NEWS AND MISCELLANY.

TO THOSE WHO WEAR FALSE HAIR.

The English consul at Canton says that eighty thousand pounds of human hair have been exported from that city during the past year, and that it comes mainly from those who have died of contagious disease, mendicants and criminals.—*The Physician and Surgeon.*

THE NASTIER THE BETTER.

Turpentine, treacle, and castor oil,
Add some creosote, gently boil;
Sift iodoform into the stuff;
Add some glycerin (quantum suff.)
Set it aside for some time to cool—
That's the medicine for boys at school.
—*Medical Press.*

HOW IT WORKS.

There was an old woman—I tell you true—
Had pains till she didn't know what to do.
She took "sure cure" for them each and all,
But they just grew greater from spring to fall;
Till she prayed for death as the only cure,
And they took her to sail on a lengthy tour.

I'm that old woman—strange is the truth—
But I feel as frisky as in my youth.
I was a captive six months in a heathen land,
Where never a bottle of any brand
Could I procure. Had I staid a year,
I could never have died at all, I fear.
—*Pharmaceutical Era.*

GLASS FOR OPTICAL INSTRUMENTS.

It is stated that an immense improvement has recently been effected in the manufacture of glass for optical instruments by means of the addition to the ordinary materials of phosphorus and chlorine, which in some as yet unexplained way cause the glass to be very much more transparent, and enables it to receive a much higher degree of polish than any optical glass hitherto manufactured. Thus microscopes can be made which will render objects of the diameter of only the one eight-millionth of a millimeter visible, whereas with the best instruments now in use the diameter of the smallest object that can be seen is one sixteen-thousandth of a millimeter. This news, we fear, is too good to be true.—*Sci. Am.*

MEMBERSHIP IN THE AMERICAN MEDICAL ASSOCIATION.

This is obtainable, at any time, by a member of any State or local Medical Society

which is entitled to send delegates to the Association. All that is necessary is for the applicant to write to the Treasurer of the Association, Dr. Richard J. Dunglison, Lock Box 1274, Philadelphia, Pa., sending him a certificate or statement that he is in good standing in his own Society, signed by the President and Secretary of said Society, with five dollars for annual dues. Attendance as a delegate at an annual meeting of the Association is not necessary in order to obtain membership. On receipt of the above amount the weekly Journal of the Association will be forwarded regularly.

EXAMINATION OF CANDIDATES FOR MARINE HOSPITAL SERVICE.

A board of Surgeons for the examination of candidates for admission into the Marine Hospital Service will be convened at the United States Marine Hospital, St. Louis, Mo., October 12th, 1891.

Candidates for examination should make application to the Surgeon General, U. S. Marine Hospital Service, Washington D. C., as early as practicable, and should enclose testimonials from at least two reputable citizens, preferably physicians, as to their professional and moral character. No person will be considered eligible for examination whose age is less than 21, or more than 30 years, or who suffers from any physical defect which would be liable to impair his efficiency or incapacitate him from duty. The candidate must be a graduate of a medical college of good standing, as evidence of which his diploma should be submitted to the board.

POPULAR EDUCATION IN HYGIENE.

We understand that the Devonshire County Council, co-operating with the National Health Society, are sending trained teachers and lecturers through Devonshire with a view to extending among the poorer population the knowledge of the means of preventing common ailments, and the selection and preparation of wholesome food. We do not doubt that good will result from this effort to educate the people. It is impossible to over-estimate the mischief which now results from ignorance, but if the ordinary means of prevention of disease and the laws of health can be made general knowledge, a great advance will be made. We shall watch the results of this effort with much interest, and we trust that the attention of other County Councils will be directed to the action of the Devonshire Council. We believe that Mr. Acland, M. P., has been instrumental in initiating this work.—*Lancet.*

LONDON'S SOOT AND FOGS.

The amount of carbonaceous and other particles deposited upon glass houses is a good indication of what the London atmosphere contains, and in many places it is only possible to procure a due admission of light to the plants by frequently washing the glass roofs. At one establishment last week two tanks constructed to collect the rain from a house completed a few years since, were cleared out, and no less than ten barrow-loads of sooty matter were removed, all of which must have been conveyed into the tanks from the glass. One scientific gentleman has been engaged in computing the amount of soot deposited from London air, and arrived at the following conclusions. He collected the smoke deposited on a patch of snow in Canonbury one square link, about 8 inches in extent, and obtained from it two grains of soot. As London covers 110 square miles, this would give us for the whole area 1,000 tons. As the quantity measured fell in 10 days, a month's allowance would need 1,000 horses to cart it off, and these stretches in a line would extend four miles. Hence London's black fog.—*Pharmaceutical Record.*

DR. FERRAN AND HIS "ANTICHOLERAIC" INOCULATIONS.

A delicious instance of the slow grinding of the mills of officialdom has just occurred in Spain. Dr. Jaime Ferrán of Barcelona, whose name was prominently before the world some years ago in connection with "anticholeraic" inoculations, petitioned the Government last summer, when the cholera epidemic was at its height in Spain, for leave to continue his experiments. Whether these "experiments" were to be confined to the scientific seclusion of the laboratory or were to be carried out as before on the public at large, does not appear. In any case, after chewing the cud of official fancy on the matter for nearly a year, the Royal Sanitary Council has only now made up its mind to reject the petition. The *Siglo Medico* points to this as a proof of the how-not-to-do-it spirit which prevails in Spanish administration. It is, however, obviously open to a different interpretation—namely, that the Sanitary Council, from former experience, thinking Dr. Ferrán's inoculations useless, if

not dangerous, but not wishing to appear to place obstacles in the way of scientific progress, judged it prudent quietly to strangle the project with red tape.

WEEKLY COST OF CARE OF THE INSANE IN AMERICAN ASYLUMS.

From the late report of the Committee on Lunacy of Pennsylvania we learn that the per capita weekly expense of maintainance in the principal State Hospitals was (1890) as follows; Harrisburg, $3.81; Danville, $3.31; Norristown, $3.61; Warren, $3.26; Dixmont, $4.31—the average being $3.66. This was for an average aggregate hospital population of 4879. In New York the average cost for 1907 insane in four hospitals was $5.09. In Michigan, three hospitals, 2382 patients, $3.84. In the Government Hospital at Washington, with 1474 inmates, the cost was $4.23. In Wisconsin, the cost was $3.76; in Indiana, $3.96; in Massachusetts, $3.60; in Connecticut, $3.20; in Minnesota, $3.15; in Ohio, $3.39; and in Illinois, $2.95. The great lessening in the cost of maintenance is in some cases due to the self-supporting labor done by the chronic insane. It is strange inhumanity that frequently, and indeed generally, supports thousands of idle people, when their labor rightly and judiciously applied would be a blessing to the one laborer who is supported and to the other outsider who is taxed for the supporting. Let the able ones be put to work.—*News.*

MISSISSIPPI VALLEY MEDICAL ASSOCIATION.

To the Subscribers and Readers of the MEDICAL AND SURGICAL REPORTER:

The Mississippi Valley Medical Association will hold its seventeenth annual session at the Pickwick Theatre, Jefferson and Washington Avenues, St. Louis, October 14, 15 and 16th. A full programme of interesting papers has been prepared and provision has been made for the fullest, freest and most complete discussion of the same. Representative men from various sections of the country have been invited to open the discussions. The local profession of St. Louis is a unit to the end that every visiting physician shall be received and welcomed in a regular warm hearted, St. Louis style.

The same qualifications for membership are requisite in this Association as for the American Medical Association, the former being subordinate to the latter. If eligible, you and your friends together with your wives and families are most cordially invited to visit St. Louis and enter into the scientific work and the social pleasures as you may desire.

I. N. LOVE, M. D.,
Chairman, Committee of Arrangements.

TREATMENT OF MORPHINOMANIA.

Two steps in advance have recently been taken in the provision for the treatment, in an institution, for morphine and allied narcomaniacs. One is in England, the other in America. Under the Lunacy Act of 1890 morphine or other inebriates may be received as voluntary boarders into licensed houses for the insane, with the consent of two Commissioners of Lunacy or two justices, by simple application, without specifying the cause for which the applicants desire to be admitted. The American step is the opening of a home at Brooklyn for the reception of 12 *habitués* of morphine, cocaine, or chloral, of whom one-fourth are to be free patients, if an endowment fund of £12,000 can be raised for the latter purpose. The treatment pursued is preliminary sedation by sodium bromide, and rapid reduction of the narcotic, the period of reduction averaging from 10 to 12 days.

PTOMAINES AND BACTERIA IN CANNED MEATS.

Dr. Cassedebat (*Moniteur de L'Hygiéne Publique*) has examined four cans of meat to which his attention was drawn by an outward bulging of the cover, indicating more or less fermentation since sealing. He removed portions of the contents of each tin under strict aseptic precautions and found numerous and various kinds of bacteria. Of the 26 varieties of bacteria found 11 only gave any result when inoculated on animals.

The liquid itself, if inoculated, always caused poisonous symptoms; and just such symptoms as have been observed at times after the use of canned meats.

This fermentation, according to Dr. Cassedebat, can be easily avoided by using a little care in preparing the meat. Still greater care, however, should be used to choose perfectly healthy cattle for killing, and to preserve only fresh meat. If meat, when canned, is infected with bacteria or spores which have not yet acted upon it, no harm will result, for the heat to which the tins are subjected is high enough to render

the bacteria harmless. If, however, ptomaines are formed, the high temperature is of no avail, and the meat remains poisonous. Cassedebat is of the opinion that carelessness and not infected meat is the cause of the trouble in most cases.

TALE OF THE POLYPHILOUS DRUG CLERK.

TOLD IN FIVE TONGUES.

In tempus old a drug clerk lived,
Qui loved pullas deux;
He no pouvait pas quite to say
Which one amabat mieux.

Dit-il lui-meme un beau matin.
"Non possum both avoir,
Sed si address Amanda Ann,
Then Kate and I have war.

Amanda habet argent coin,
Sed Kate has aureas curls;
Et both sunt very agathae.
Et quite formosæ girls."

Enfin the youthful pharmakeus
Philoun the duo maids,
Resolved proponere ad Kate
Devant cet evening's shades.

Procedens then to Kate's domo,
Il trouve Amanda there,
Kai quite forgot his late resolve
Both sunt so goodly fair.

Sed smiling on the new tapis,
Between puellas twain,
Coepit to tell his love a Kate
Dans un poetique strain.

Mais, glancing ever et anon
At fair Amanda's eyes
Illae non possunt dicere
Pro which he meant his sighs.

Each virgo heard the demi-vow,
With cheeks as rouge as wine,
And off'ring each a milk-white hand,
Both whispered "Ich bin dein."

—*Journal of Education.*

CONGRESS OF AMERICAN PHYSICIANS AND SURGEONS.

SECOND TRIENNLAL SESSION.

We are in receipt of the following letter, which will be of interest to any of our readers who contemplate attending the above named Congress:

1632 K Street,
Washington, D. C., Aug. 18, 1891.

Dear Sir: The following instructions are mailed to you for your guidance in obtaining a reduction in railway fares:

The Trunk Lines, the New York and Boston lines, the Southern Passenger Association, and the Central Traffic Association, will transport persons wishing to attend the Congress from points on their lines to Washington and return at the price of one and one-third the regular fare on the following conditions:

The going ticket must be purchased within three days before the opening date of the meeting.

Each person availing himself of the concession must pay full first-class fare going to the meeting, and must obtain a certificate from the agent of whom the ticket is purchased.

Those holding such certificates, when countersigned by the proper officer at the Congress, can obtain return tickets at one-third the highest limited fare.

Certificates are not transferable, and the return tickets secured upon certificates are not transferable. If any of them are sold or transferred they must be redeemed at the highest first-class rate by the person making such sale or transfer.

No certificates will be countersigned at the Congress except those presented by physicians attending the Congress, or their wives and members of their families; nor will any certificate be countersigned after September 26th.

No refund of fare will be made on account of any person failing to obtain a certificate.

Those who wish to avail themselves of this method of obtaining reduction in fares should present themselves at the office for certificates and tickets at least 30 minutes before departure of trains.

It is absolutely necessary for each passenger before starting to obtain a certificate from the ticket agent of whom the going ticket is purchased, otherwise he can obtain no reduction in the return fare.

There will be no stop-over privileges on the return tickets, which must always be by the same route as the going ticket.

Members may obtain tickets on these conditions for their wives and members of their families, as well as themselves.

Tickets for the return journey will be furnished only provided the properly countersigned certificates are presented to agent at return starting point within three (3) days after the adjournment of the Congress, Sunday not to be counted as a day.

By order of the Committee of Arrangements.

Samuel S. Adams, M. D.,
in charge of R. R. matters.

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Clinical Lectures.

THE VALUE OF MODERN WOUND TREATMENT, JUDGED BY THE RESULTS OF LAPAROTOMIES.

BY PROFESSOR E. KUESTER, M. D.,

PROFESSOR OF SURGERY AT THE UNIVERSITY OF BERLIN, GERMANY.

Gentlemen:—We stand to-day under the influence of one of the most powerful discoveries that has ever come within the domain of medicine; a discovery which is destined to largely re-model our science on a new basis. But the experiences with Koch's fluid have as yet been far too limited to admit of any final or definite criticism. While at this opening lecture to you, I feel that it is impossible to let this subject go by unnoticed, yet I will content myself with giving you, at the close of this lecture, the results of a few cases treated with this remedy. In the meantime we will turn our attention to the consideration of another discovery, which in its turn has almost completely re-modelled surgery, and has of late made its potent influence also strongly felt in the field of internal medicine. I refer to the so-called Listerian treatment of wounds.

The key-notes of the modern treatment of wounds are found in the words "antisepsis" and "asepsis." While we for several years past, have spoken of an "antiseptic condition" the term of late seems to have given place to that of "aseptic condition." With what justification this has been done it shall be our task to consider.

Pathogenic germs can infect wounds in two different ways, either through the circulation, or from without. We distinguish, therefore, "self-infection" (the much used word "auto-infection" is a misnomer,) and "infection from without." Regarding the first, as it only can occur under very exceptional conditions, we will not discuss it here.

In infection from without, the pathogenic germs either come from the air, or else they are brought into the wound by the contact of solid or fluid bodies. The views entertained regarding the comparative frequency of these two means of infection have undergone considerable modification. While Lister, basing his views upon the experiments of Pasteur, was of the opinion that the air was the principal means for the carrying of infection, and that, therefore, before this air came in contact with the wound it must be disinfected, these views were opposed on purely practical grounds at first by German surgeons—V. v. Bruns, and others— until finally it was scientifically demonstrated, that no real importance could be attached to the supposed dangers of aëreal infection. Fritsch, of Breslau, was one of the first who disclaimed the necessity of making any provisions in the operating-room against possible aëreal infection, and held such procedures as forcing the onlookers to remove their coats, or to undergo a compulsory washing, as not only unnecessary, but laughably absurd. In the meantime, gentlemen, I hesitate from going so far. Nature has so many ways, and ways which are most difficult to follow, by which she cares for the lives of her most minute offspring, that it surely does not seem justifiable to completely ignore any reasonable proposition or precaution. Can it really be immaterial whether the garments of the students which have possibly come directly from contamination in the dissecting room,—can it be really immaterial, I repeat, whether these germ laden garments are brought into a room where major operations are being performed, or perhaps even large cavities of the body are being opened? Should the often unavoidable crowding of the room, by which mechanically, by the rubbing of garment against garment, the germs are set free and wafted in the air, be looked upon as a procedure entirely devoid of the possibility of causing traumatic infection, so long as the immediate participants in the operation have

taken every personal precaution to free themselves and the patient from infection? Truly, I think not. And, therefore, I still feel constrained to abide by my old rules, and request that the students attending my clinics shall not attend them in the same clothes in which they also visit the institutes of anatomy and pathological anatomy. And further, that in especially dangerous operations, the students present will kindly put on the clean white over-alls which I will provide for their use.

How that may be, however, it is evident that the principal source of traumatic infection, and indeed almost the only source, is actual contact with germ-laden articles. That the skin of the patient should be scrupulously clean, that the operator, his assistants and the attendants should wear no clothes of questionable cleanliness, that the instruments, sponges, hands, and indeed everything which comes in contact with the wound should be absolutely clean or aseptic, is well known, and cannot be too strongly impressed. The greatest danger, without doubt, lies in the nails of the hands; Schede, Kuemmell, Fuerbringer, and others, having demonstrated the fact that numerous pathogenic germs are found both under the nail and around the matrices, and these germs can only too easily lead to an infection of the wound. The trustworthiness of a surgeon nowadays, may be largely determined by the care which he bestows upon the cleanliness of his hands and nails. Especially in major operations too much care cannot possibly be taken. The method which Fürbringer has empirically shown to be of value, deserves imitation, because it at least insures safety to a large, although in no way absolute, degree. It is as follows: The hands and nails should first be mechanically rendered as clean as possible, both by means of a sharp knife (for the nails) and a brush with which the hands and nails are both scrubbed with hot soap and water. Then the hands should be soaked for several minutes in alcohol, and finally immersed in a solution of bichloride of mercury. Mikulicz besides all this, concludes by rubbing iodoform under the nails and around the matrices. With these precautions, it is obvious that the possibilities of traumatic infection are reduced to a minimum.

All instruments and sponges that come in contact with the wound, in fact everything that touches it, must be most carefully cleaned, sterilized, and rendered aseptic. Formerly, we used to disinfect our instruments by immersing them in a solution of carbolic acid, of say 5 per cent., for about an hour before the operation, and from which they were only removed as required. What is far more reliable, is a boiling of the instrument in a weak soda solution. For this purpose we use the apparatus made originally by Lautenschläger of Berlin. The sponges—which by the way, I greatly prefer to tufts of gauze or cotton—are first thoroughly cleaned, and then placed in porcelain jars filled with a 5 per cent. carbolic acid solution. These jars are labelled with the day of the week, so that in choosing a jar, we take one marked with the day the operation is being performed on, and are thus sure of the sponges having at least been soaked for a week in the disinfecting fluid. Also the dressings, sutures, ligatures and even bandages should be prepared with the greatest care. They should be sterilized in an oven by heat, and it is also well to impregnate them afterwards with some antiseptic, such as thymol, iodoform, or others.

A wound treated thus aseptically, a wound which has thus been kept free from every pathogenic germ, must and will take an aseptic course, that is to say, that it must heal by first intention without the formation of one drop of pus. According to this, therefore, asepsis is without doubt the ideal which every surgeon strives for.

This is more true than the ideal theory of antisepsis, held until recently. For, antisepsis as it was originally practiced, offered many difficulties and inconveniences. I may recall to your mind that strict antisepsis, as it was first practiced necessitated a continual irrigation of the wound with an antiseptic solution; that this gave place to an occasional washing of the wound during the course of the operation; this in turn to a douching of the wound just before its closing. But even this mild use of antiseptics is not without danger. None of these germicidal substances are without properties which can be directly injurious to the organism, whether the substance be carbolic acid, or bichloride of mercury, or iodoform, or salicylic acid. In part they occasion regional and general specific symptoms, which may lead to a fatal termination; nearly all exert a harmful action upon the kidneys. This is caused because these substances, after having been absorbed into the circulation, are eliminated through the kidneys, and there cause a peculiar degeneration of the renal epithelium, which when even occurring in a small degree is most harmful to health, and which when severe leads to uræmia and death. To these possible sequellæ must also be added the widely

varying susceptibility found in different subjects, to the action of antiseptics. A moderate dose of iodoform or bichloride of mercury, which in twenty patients could be administered without causing the least unpleasant symptoms, may, in the twenty-first case, give rise to toxic symptoms of extreme gravity. We are, therefore, not in the position to rely without questioning upon the results of the employment of any toxic antiseptic. There is scarcely a surgeon, who, if having used antiseptics extensively, cannot report fatal casualties as resulting from their use.

Theoretically, therefore, there can be no doubt but that the practice of antisepsis should yield to that of asepsis; let us now, therefore, briefly see whether this theory can be supported by practical results.

Even the most careful surgeon is not always in the same quiet harmony with his patient; he is—as is every man—subject to sickness and health, to moods and feelings, which may be, in a certain measure, independent of internal or external influences. Hereby is already occasioned a certain variance of the aseptic attitude. This possible variance is only increased when more than one person comes in contact with the patient. The surgeon is also influenced by the surrounding conditions even possibly more than from his own disposition, and no matter how great his skill, or how careful his method, still, a certain amount of uncertainty will cling to all human actions, and the possibility of mistake, by omission or commission remains open. It is, therefore, a very natural wish, that taking all these possibilities into consideration, the surgeon would desire to correct all possible mistakes by careful disinfection before the closure of the wound.

Herein is expressed the first limitation by which we are confronted in the aseptic treatment of wounds.

A second limitation for this method is found in the fact that we do not always have to deal with wounds inflicted by the surgeon at the time of the operation, but frequently with old wounds, and wounds sustained in every conceivable manner. In such cases an infection of the wound has already occurred, and at present we have no other method at our control than careful disinfection with antiseptics.

A third limitation is found in the fact that we are frequently compelled to operate in such regions of the body where it is impossible to maintain asepsis for any length of time. Wounds of the oral cavity, of the genitalia, and of the intestines, would—in the majority of the cases—not remain aseptic by the mere use of aseptic preparations. In such cases both the dressings and bandages would gradually become infected, and the use of antiseptics cannot be dispensed with.

A fourth limitation is the difficulty in obtaining the necessary material and assistance in general practice and in times of war, on the field of action. Even in a well-ordered clinic, or cleanly kept hospital, it is often difficult to avoid all mistakes, how then is the country practitioner, without the necessary apparatus for sterilization, and without competent assistants, to compete with the results obtained in the well organized clinics? And if this is the case with the average practitioner in times of peace, how is it with the surgeon on the battle-field in times of war? Both must of necessity be satisfied with obtaining the ideal aseptic conditions only so far as it is in their power to do.

If therefore, gentlemen, asepsis is not universally applicable in surgery, then asepsis should not be exclusively taught. In this clinic you will, therefore, be taught both methods, with the hopes that you also may become conversant with the minutiæ of both. It will also be my pleasure to demonstrate to you why at one time I use the one method, and at another time the other; and why, at times, a combination of both asepsis and antisepsis. It is the knowledge of the various remedies, and the ability of being able to pick the ones suitable from them, that makes the successful and skilful physician. There exists no such a thing as "luck" in surgery, in the sense expressed by the great Russian surgeon Pirogoff, but every result of to-day can be based on knowledge and ability.

Let us look about us, therefore, to see and note the results of the application of these fundamental principles, choosing for this purpose a groupe of operations which constitute the most delicate test. I refer to laparotomies.

The first laparotomies were performed at the time when all the profession was agog with wonder over the brilliant successes following the introduction of antiseptics. At that time it was thought impossible to over-do the most stringent application of the method. Von Nussbaum, of Munic, one of the most enthusiastic and worthy introducers of general antisepsis, who only a short time since has been lost to the profession by death, poured his carbolic acid solution by the bucketful into the abdominal cavity, and

ascribed the subsequent collapse, which was only prevented from being fatal by means of artificial respiration continued for hours, not to the action of the drug but to other reasons. At first slowly, but then ever more rapidly the danger of the adoption of such procedures, especially in a cavity of the body, the absorptive power of which could so quickly carry the poison into the general circulation, became realized. But the consideration that the abdominal cavity possessed peculiar anatomical conditions, rendering any infection here much more dangerous than at any other portion of the body, still caused antisepsis to be held in laparotomies longer than in perhaps any other surgical procedure.

We know now that the peritoneum is able to withstand the inroads of several different infectious germs, but only under two conditions; one being that there shall be no large collection of fluid which may serve as a culture medium for the germs, and the other being that in case the germs do propagate with rapidity the displacement of the blood or serum over the entire abdominal cavity by means of peristalsis will prevent the further propagation of the germs in isolated foci.

More important, therefore, than in any other operation is the strictest observance of asepsis in laparotomies necessary. Antiseptic drugs should either not be used at all, or else in the most limited manner possible. The results which Fritsch has obtained with sterilized salt and water solution are absolutely conclusive as to the justifiability of this. In 52 laparotomies he lost only two cases, and neither of these was from sepsis. At the same time, in order to obviate possible errors, or if they occur to render them of as little danger as possible to the patient's life, it is of the highest importance to keep the abdominal cavity dry from all blood or liquids capable of putrefaction or infection.

An important help towards this end is the elevation of the pelvis, recently suggested by Trendelenburg, at least in laparotomies the operative field of which is in or near the small pelvis. This procedure not only gives a much better view of the operative field, but it also occasions a far smaller hæmorrhage than when the patient is laid horizontally. By this elevation the veins of the pelvis are so nearly emptied, that the troublesome parenchymatous bleeding which otherwise frequently occurs, is almost entirely absent.

In the following tables I give the results of a number of laparotomies performed by me at my private clinic, and in the Augusta Hospital in Berlin, during the last one and three-quarter years. In these cases I followed the rules I have endeavored to lay down in this lecture, relating to asepsis, but have also used antiseptics with caution as the case seemed to indicate. The list comprises 60 cases in all.

Exploratory laparotomies, for various causes,—9 cases; 9 recoveries.

Ovariotomies (some of which were most difficult)—18 cases; 18 recoveries.

Salpingectomy, for pyosalpinx,—2 cases; 2 recoveries.

Myomotomy,—6 cases; 2 recoveries; 2 deaths (2 from sepsis, 2 from bichloride of mercury poisoning.)

Vaginal hysterectomy,—3 cases; 2 recoveries; 1 death (from hæmorrhage.)

Echinococcus of the abdomen, (liver, and pelvic mucous membrane),—3 cases; 3 recoveries.

Extirpation of a sarcoma mesocoli,—1 case; 1 death (from sepsis).

Incision of a pancreatic cyst,—1 case; 1 recovery.

Operations on the gall-bladder and gall ducts,—3 cases; 2 recoveries; 1 death (from phthisis pulmonalis).

Laparotomy for ileus (internal strangulation),—3 cases; 2 recoveries; 1 death (from internal strangulation).

Laparotomy for bullet wound of the abdomen,—1 case; 1 death (from sepsis).

Colotomy,—4 cases; 4 recoveries.

Gastrotomy,—1 case; 1 death (from inanition).

Gastro-enterotomy,—5 cases; 1 recovery; 4 deaths from varied causes, but none from sepsis.

Total,—60 cases; 46 recoveries; 14 deaths.

From these fourteen fatal cases let us subtract those which were not attributable to the treatment of the wound: the one gastrotomy, the four gastro-enterotomies, the case of ileus, that of phthisis, and that of hæmorrhage. There remains therefore, 6 fatal cases attributable to the treatment of the wound, and among these, 4 cases of sepsis. One of the latter must also be subtracted from the list, as you will readily admit when you hear the history of the case, which I will detain you by giving briefly.

The patient was a student, twenty-one years of age, who had sustained a bullet wound of the abdomen in a duel. The ball had entered the abdomen to the right of the navel, had passed through the pelvis and could be easily felt through the skin of the buttock, from which it was removed. The

young man was very anæmic and his abdomen was evidently full of blood. Laparotomy was immediately performed and a large quantity of blood found in the abdominal cavity. The intestines were found perforated at four different places, and the mesenterium at four other places. All the openings were sewed up and the abdominal cavity carefully cleaned. The patient died 36 hours after the operation. The autopsy showed a circumscribed septic infection in the region of the ilium, and in its center the cartridge case was found, which must have been torn out of the revolver with the bullet and had passed through the pelvis only stopping when it came in contact with the bony obstruction. This unforseen accident had caused the unfortunate man's death.

Even if we exclude this case there will remain three cases of sepsis and two of bichloride of mercury poisoning. In the two latter cases only a small amount of the drug was used, and that was used with the greatest possible precaution. From the results of these cases I have determined to use no antiseptics in abdominal sections unless absolutely necessary. You will, therefore, see me hereafter perform all typical laparotomies in a purely aseptic manner.

In conclusion I might refer at length to several of the cases given in the table, in which the operation was attended with most excellent results, and which in themselves were of more than ordinary interest. But for lack of time I must reserve this pleasure for some future lecture it having only been my intention in this discourse to clearly point out to you the fundamental principles of our modern method of treating wounds, with a brief glimpse at their results in certain test cases, and upon these principles I propose to work before you. Allow me therefore, to request your participation in my clinical work.

GENERAL PARESIS.

BY JAMES HENDRIE LLOYD, M. D.,

PHYSICIAN TO THE PHILADELPHIA HOSPITAL.

A CLINICAL LECTURE DELIVERED AT THE PHILADELPHIA HOSPITAL.

Gentlemen :—I have taken as the subject for this lecture a few of the more important forms of insanity. I have considered that a large Hospital like Blockley, in a medical center like Philadelphia, and the only Hospital in the city that presents an opportunity for the demonstration to students of mental disease, should not go unutilized. It goes without saying that the subject of diseases of the mind is extremely important to the practitioner of medicine. No apology is required for bringing a subject of such importance before the students who will become the general practitioners, and who in nearly all instances are the first to see the patients in the incipient stages of these diseases. It will fall upon you to recognize the beginning stages of nearly all of these mental diseases and it is of the first importance not only to your reputations as practitioners but also to the welfare of your patients and the community, that you should be able to detect the little flaws which mark the beginning of the often irretrievable ruin of the mind of your patient.

Insanity is not a specialty to be studied only within the walls of an asylum. As a disease of the highest organism in nature it often confronts, and must always claim the interest of the educated physician everywhere.

Among the most important of these diseases is the one which I have selected for consideration to-day. Not only is it one of the most important but it is one of the most interesting of the diseases of the mind. I refer to general paresis. This has many synonyms. It is alluded to as general paresis, dementia paralytica and general paralysis of the insane. These three are the leading designations. General paresis is the term I have chosen as it is probably the one most frequently used. This affection has been well called the scourge of civilized man. We have in all of the lower races and classes of man more or less prevalence of mental disease, but this particular affection seems to be reserved for those who are thrown into the competition and struggle for life in our great civilization. This disease belongs more especially to our manufacturing and commercial centres rather than to the agricultural and rural districts and it is best displayed in the higher types of man. This reminds me to say that we do not find the best examples of general paresis in hospitals for the pauper insane. I could show you much better marked forms in some other hospitals of the city and State, but we must content ourselves with the material that we have. The important fact in the ætiology of the disease is that it is found best developed in highly civilized and developed men,—those who bear the great burdens and take the front rank in the complicated life of our civilization. Hence it is

that we often see the disease best developed in railroad men or professional men. One of the most marked examples that I have seen was in a high official of one of our large railroads. I have seen other examples in lawyers, physicians, actors and politicians; in other words, in men who take upon their shoulders great responsibilities with incessant mental strain.

Having said so much by way of introduction, let me ask what is general paresis? I shall first tell you what it is anatomically, and pathologically, so that as we develop its symptomatology you can, as it were, fit in the symptoms as they arise. General paresis is a wide spread degenerative disease of the cerebro-spinal axis affecting especially the cortical matter of the brain, although not confined to it. In its progress it involves also the cord and even the nerve trunks and the sympathetic system. The degenerative changes involve especially the brain cortex. The disease spreads like a slow fire destroying little by little the important and essential anatomical structures of the brain. This consequently leads to the greatest variety and complexity of symptoms, although these symptoms usually pursue a more or less typical course and admit of a ready diagnosis being made. This degenerative disease of the brain is probably an exhibition of over strain.

We know that the nutritive supply of all organs is under the control of what is termed a vaso-motor system. This system has control of the proper blood supply and nutrition of the parts. In this particular disease we probably have as the initial cause overstrain and loss of the equilibrium of the vaso-motor nervous system. This leads to a flushing of the capillaries and to a too rapid growth and nutritional change. This gradually leads to cell-proliferation, especially in the net-work of tissue which acts as a stroma or scaffolding to support the essential elements of the brain,—the cells and nerve fibres. This overgrowth of tissue leads to a form of sclerosis. This connective tissue overgrowth slowly leads to a blotting out of the nerve elements. Hence the disease has as its essential characteristic, progressiveness. When it once starts it continues and I have yet to see a well authenticated case of cure. It gradually leads to a perversion, and then a destruction, of all the more important functions of the brain and of the cerebro-spinal axis. We can say of general paralysis that a well-marked case, if followed from beginning to end, becomes a walking museum of pathological specimens and a whole hospital ward of clinical neurology. Some one has said there is scarcely any disease of the nervous system that is not more or less displayed by the general paretic before the disease terminates. This is a subject which it is difficult to condense in the limits of an hour, but with the assistance of the patients, who are present, I shall endeavor to give you a statement of the whole process.

One word in regard to your position as practitioners of medicine with reference to this disease. I have said that the general practitioner is the one who first sees the insane patient. There is no case of insanity the recognition of which in the early stage, is more important than that of general paresis. This is, therefore, a very important subject. It is a well recognized fact that of all the insane, the general paretic in the first stage is the one most apt to bring trouble and disgrace upon himself and mortification upon his family. It is, therefore, of importance that we should recognize the prodromal stage of general paresis.

We are accustomed to divide the disease into three stages. The first is the prodromal or incipient stage. The incipient stage is marked especially by a change of character. Beginning in a man in early middle life, for this disease is apt to begin between the ages of thirty-five and forty-five years, an insidious change is observed which often is recognized first by the immediate family and friends of the patient. This change of character is very difficult to describe in words. It is a loss of the acuity of the faculties of the patient. The edge is taken off. It is marked by little lapses of memory, by indifference of the patient to his ordinary avocations; he is no longer the man he was; he no longer has the ability to concentrate his attention, and he becomes rather weak and foolish. He often becomes worse than that; he may become flagrantly wrong in his moral character. This is the period of the disease in which the individual will not infrequently bring scandal upon himself and family by theft or flagrant violations of the moral code. He may be lodged in jail for indecent assault or for stealing in a purposeless manner something that he does not want. At this period he becomes unable to apply himself properly to business. I recall one instance of a prominent business man who was constantly falling asleep in his office. This was the first symptom to attract the attention of those around him. This somnolence is not unusual in the early stages of general paresis. This man would sleep nearly all day in his office-chair and at night he would be sleepless,

disturbing the whole household. During the prodromal stage the individual becomes changed in other respects. He becomes silly and boastful in his manner, and erratic in his business and social relations. He loses his grip on his business and is no longer able to discharge properly his duties. These are the symptoms which are apt to first call attention to the disease.

At this time if a more careful study is made there will be found in addition to the deterioration of mental and moral character, beginning lesions in some of the muscular groups. Recollect that we have a disease which is insidiously working its way through the brain cortex. You have already learned that the muscular system is represented in the brain cortex. That is according to the doctrine of cerebral localization. As the disease advances, attacking here and there a group of nerve cells, it begins to show its effect upon these motor cerebral centres and certain lesions of the muscular system appear. This is marked by ataxia and paresis, which are noted especially in those muscular functions requiring fine adjustment. We note them in the eye, in the muscles of articulation, in the muscles of facial expression and in the muscles of the hand required to execute precise movements as writing, playing the piano, and certain forms of skilled manual labor. At the same time, the muscular change is apt to be seen in the patient's gait. At this time simple ataxia of walking may exist, and also lesions dependent upon some advanced disease of the spinal cord to which I shall refer later. Exaggerated patella reflexes are common.

I now pass to the second stage. This stage is so well marked that it forces itself upon the attention of every one. In this stage we have a more advanced degradation of all the mental and the moral faculties. There is an advance of all the symptoms, but the condition which is most marked is the progressive dementia. Dementia is one of the central symptoms of general paresis. Whatever variations may be seen in other symptoms, this one symptom stands out as a central one, the progressive dementia. In this second stage the patient has advanced from the condition which we call change of character to a condition of decided alienation, or insanity. He is no longer simply a changed man,—he is an insane man. The most marked characteristic of this insanity as put down in the books, although it is not always present, is the peculiar expansive or grandiose delusion. This is a marked peculiarity, the ear mark as it were of the general paretic. This peculiar type of delusion may be misunderstood. The delusion of grandeur of the general paretic is not like any other delusion which we have in the insane. It is marked by an extravagance, a "claim-all" kind of tendency which is not seen in any other form of insanity. The general paretic not only claims that he is rich, but that he is extravagantly and foolishly rich, not only that he is a millionaire, but many times a millionaire. I recall one patient who not only imagined that he was rich beyond all conception of avarice but even that the very blood which fell from a scratch of his finger was pure gold. Another told me that he had money enough to buy the whole world. The individual becomes the founder of cities. He not only founds them but owns them. One patient told me that he owned a city of four million inhabitants in the southern part of New Jersey. These persons think they are very strong in their physical development. They are men of herculean strength. They have immense influence. They can rule the world. They are able to gain any purpose that they want. They have great inventive ability. Any foolish, puerile conception that can occur to the human mind is not too extravagant. This extravagance is characteristic of the delusion of the general paretic. So extravagant is the patient that his friends believe sometimes that he is not sincere; that he is assuming his delusions. These delusions are characterized also by what in technical language we speak of as lack of system and lack of fixation. They are not systematized or fixed delusions. It is important that you should know what is meant by these two terms. Fixed delusion as the words imply is an erroneous belief which is fastened in the mind and does not change. The man clings to a fixed delusion not only from one day to the next but from one week to the next, or from one month to another or perhaps for a life time. I have known a monomaniac to adhere to one delusion for years. This is not characteristic of the general paretic. With him the wealth of to-day becomes something else of to-morrow. You can lead him by suggestion from one delusion to another. They are not fixed in his mind as are the delusions of the monomaniac. Yesterday in looking over the patients in the Hospital, I found a monomaniac who believes that he owns sixty-eight houses. He has clung to this belief for three years. He not only owns them, but he knows who built them. In one sense he is not mistaken, that is, he is not wrong in all his

deductions. He is logical. The general paretic will own sixty-eight houses to-day, to-morrow it may be sixty eight thousand houses and the next day something else. It is an unfixed delusion. These delusions are also unsystematized. An unsystematized delusion is one that is not coherent. It is not persistently and coherently held to. The delusion changes, it is not a systematized belief. The patient does not follow it to its logical conclusions. The monomaniac, who especially has systematized delusions, will act upon his delusion and keep it up for years. He will draw correct conclusions from an insane premise. The general paretic changes his delusions. He puts them on and takes them off, and does not follow them logically to their legitimate conclusions.

In addition to this peculiar form of delusion, coming in the second stage, the general paretic shows also progressive failure in his muscular system. He becomes more and more weakened in his muscular power. I have stated that in the first stage there is some progressive weakness of the eye muscles. This becomes characteristic in the second stage. Certain paralyses of the external and internal eye muscles occur. The pupil fails to re-act to light, and while it fails to re-act to light, it continues to accommodate. This is the Argyle–Robertson pupil. We see this in general paresis, although it is not so frequent as has been held. The pupil in this affection is more commonly an unequal and irregular pupil. You may have a typical case of general paresis and on examination of the eye, you will not find the Argyle–Robertson pupil, but if you look carefully you will probably find unequal pupils. An irregular pupil is also a very characteristic symptom. Instead of a perfectly circular pupil, there will be an approach to the cat's pupil, that is, an oblong pupil, or one pulled down at one point. Be careful that you do not make the mistake of considering this the result of an old attack of iritis. In iritis there is fixation of the pupil with irregularity. It is especially important to make this distinction in specific cases, for specific iritis will give you an approach to this pupil of general paresis. There may be involvement also of other muscles. Some of the recti-muscles may be affected causing strabismus, although this is not common except in the more advanced stages. Ptosis may be present. Beginning disease of the retina or of the optic nerve may be observed. A very common symptom is difficulty of articulation. This it must also be borne in mind is often a symptom of the disease in an early stage. I distinctly recall a young gentleman who came to me several years ago and told me that he had a little difficulty in his speech. He did not know what was the trouble but thought that he needed electricity applied. I did not believe this but in order to gratify him and gain time for observation I made a few applications. On careful examination I found a little ellision of syllables. He did not stammer but here and there he would drop a syllable. This annoyed him. The explanation of this was that some of the centres in the cortex were beginning to be affected. The man was under observation for some weeks until I felt positive of the beginning of the trouble. There was not another symptom except a little suspicious lapse of memory. He could not recall well and could not apply his mind to business. I had the eye ground examined and beginning optic atrophy was reported. I made a diagnosis of a very early stage of general paresis and this was confirmed by the fact that the man developed gradually well marked symptoms of general paresis and in six months was taken to the Pennsylvania Hospital for the insane. He is now well advanced in the third stage of general paresis.

Let me now call attention to the patients before you.

Case I.—I have brought this man before you because he illustrates some of the beginning symptoms, such as lack of innervation of the facial muscles. Looking carefully you will notice a slight alteration in the face. The right side of the face is a little flattened and in addition there is a little muscular spasm. This is usually not so well seen as in this case. Here it is rhythmic and going on constantly. It may not be confined to the face. I have seen these myoclonic, almost rhythmical, shocks in the legs. The tongue is protruded in a straight line. It is an advantage in these cases to have certain test words such as agricultural, parallelopipedon, etc. You will find that the patient has difficulty in enunciating this class of words. He has difficulty in pronouncing some of the labials, linguals and dentals, and where such sounds as R, L, P, D, and T come together he will slide or slur over the words. This man has this difficulty.

Case II.—As the disease advances there is more or less involvement in the spinal cord. There are two diseases especially which are associated with general paralysis of the insane. These are locomotor ataxia and lateral sclerosis. Here is a man whose disease was diagnosed originally as locomotor

ataxia. There is a form of general paralysis which beginning as locomotor ataxia may persist for some years, the patient being free from mental symptoms. As time advances mental symptoms may manifest themselves. This man has all the symptoms of locomotor ataxia. It is in locomotor ataxia especially that the patient has the Argyle–Robertson pupil as seen in this case. He has abolition of the patellar reflexes, fulgurent pains and an ataxic gait. When he stands with his eyes closed, he would instantly fall if not supported. This has persisted as locomotor ataxia for years, but now the man has expansive delusions. He is ready to go and rescue Ireland. He has certain other delusions, and he has a drawling or scanning speech. I think this is a case of general paresis on top of locomotor ataxia.

Case III.—Is an illustration of general paresis in the female. General paresis of a well marked type is extremely rare in the female sex. I have told you that an ætiological factor of importance is great mental responsibility on the one hand, and on the other excesses. These two factors are more prominent in the male than in the female. I do not insinuate that women never take heavy responsibilities on their shoulders, but, as a rule, they do not enter into such active competition as men, and assume the cares that crush down and render necessary the use of abnormal stimulants to keep up the strength. The man who carries upon his shoulders heavy business responsibilities and attempts to keep up his strength on alcohol is the kind of individual who is liable to get general paresis. This is so especially if he indulges in sexual excesses and contracts syphilis. Women are comparatively free from these conditions, heavy business strain alcoholic and sexual excess. This woman, about whom we know very little, has been diagnosed as a case of multiple sclerosis. I believe that she is a case rather of general paresis. She has the peculiar drawling speech seen in general paresis. Multiple sclerosis does not show such distinct mental symptoms as general paresis. This woman has very unequal pupils, the left is very much dilated while the right is normal. When she shuts her eyes you can see the muscular tremor. The pupils do not accommodate or re-act to light. This woman has also lack of attention. She can not keep her eyes on any object. She can not hold her hand out for any length of time. She shows the muscular tremor in the hands and in the muscles of speech. Her mental condition is one of advanced dementia. It is too late in her disease to see the grandiose delusion in its perfection. It may be that she has never had it: it has not been as marked in the few women whom I have seen in this disease as in men.

As this disease advances from one part of the cortex to another we have certain crises. These occur generally in the second stage of the disease. They are, first, epileptic attacks; second, apoplectiform attacks; third, maniacal attacks and fourth, certain bizarre attacks which can usually be called myoclonic attacks. The epileptic attacks of general paresis are very common and characteristic. They sometimes appear at an early period of the disease. In fact the epileptic seizure is occasionally one of the first symptoms observed by family and friends. If a perfectly strong and vigorous man of 35 or 40 falls suddenly in an epileptic attack and, when he revives, you find these slight changes in the eye, and in speech, the lack of attention and lapses of memory, you should be on your guard as to the probable beginning of general paresis. Epilepsy does not begin in middle life without a cause. We have no such thing as essential epilepsy in middle life. It then has an organic basis. You may not be able to determine it, but it is there. General paresis in most cases sooner or later displays these epileptic attacks. These attacks are rather different from those of so called essential epilepsy. In the first place the epileptic seizures of general paresis are apt to be marked by a focal character. While there may be universal convulsive attacks with loss of consciousness we are more apt to have limited attacks, with, or without loss of consciousness. I received a letter recently, from Dr. Brush, of the Pennsylvania Hospital for the Insane, asking me to come and see an epileptic attack in a general paretic. The letter came by mail, and as I supposed that by that time the attack was over, I did not go. I saw the Doctor two days later when he told me that the attack was still going on. The man was in the attack for over two days. These seizures will often continue for hours. They may begin as violent spasms and simmer down to one or two little movements. They may begin as a local spasm and gradually spread from one part to another and ultimately involve consciousness. They may continue for hours in a few muscular groups as myoclonic shocks.

This is a disease of loss of control of the vaso-motor system. This vaso-motor system

is trying to regain control, it is trying to put on the brakes, but it can never quite do it. Of this struggle we have these various clinical expressions in epilepsy and in the congestive and apoplectiform attacks in which the patient falls or lies in coma with stertorous breathing for hours, and which may prove fatal. Again, the patient may have hemiplegia or monoplegia, which if on the right side is associated with aphasia. It looks like a hopeless stroke of paralysis. In the course of two or three days or a week the weakened arm gradually regains power and the patient as it were, comes to a partly normal condition. He is apt to be left the worse, however, for every one of these attacks. Again the general paretic is subject to maniacal attacks. These are of peculiar violence. The patient raves and storms, is incoherent and has little objective consciousness. He is unable to appreciate anything about him, and is quite violent and often filthy. Great motor restlessness, rather than mental agitation, sometimes marks these attacks. The man, however, is not dangerous. The mind has lost so much of its integral part that it is unable to concentrate on a definite purpose. The patient is not suicidal or homicidal. He sometimes threatens suicide, but it is a spurious tendency to suicide. He has not concentration or power enough even to kill himself. These are important points to remember. He may, however, do a great deal of damage to property and may do injury to himself inadvertently.

We now pass to the last stage of this disease. In this stage the patient having tended constantly downwards, we have him at last, leading a purely vegetating life. Memory, mind, judgment, consciousness, ability to move the muscles properly, gone, the ability to swallow, everything gone from him, leaving him merely a vegetating mass of humanity. In this last stage, he becomes the victim of trophic disorders. Bad bed sores may form. These are difficult to manage and often contribute directly to the patient's death.

Case IV.—This man is in an advanced stage of the disease, and exhibits complete dementia. The pupils are unequal. It is almost impossible to understand him when he speaks. There is great muscular debility. He is unable to converse, to feed himself or to make known his wants. The clinical history of his case is too long to be read at present. It suffices to say that he has passed through the stages of expansive delusions, muscular and speech defects, and an occasional maniacal crisis. The patient is almost bed-ridden, and will be entirely so in a few weeks, if he survives that long.

Another characteristic of general paresis is the occurrence of remissions. Often where the disease has lasted for some time the patient will suddenly become much better, so much better that he is taken from the asylum and perhaps returns to business. His fond relatives are confident that the doctors have taken an extremely unfavorable view of his case or made a mistake in diagnosis. The patient, to their eyes, becomes practically a well man. He may have a little of the pupillary defect left, some fine tremor of the facial muscles and a little lapse of his speech, but his mental condition is improved and his friends feel that a mistake has been made. If you put such a man back to business and subject him to the strain of overwork, or even if you do nothing with him but permit him to lead a quiet easy life, he will sooner or later inevitably relapse. I never knew an exception. This phenomenon of the disease is of importance from a medico-legal point of view. Several years ago this whole community was much exercised over this very subject in the case of the sheriff of the city. He had become a well marked case of general paresis. I saw him frequently and signed his certificate, and testified before the commission which deposed him from office. The Sheriff is a very important officer, as he gives title to property amounting to many thousands of dollars a year, and draws the jurors for the criminal and civil courts. The physicians were asked by the commission whether if a remission should occur the individual would be able to execute the functions of his office. I necessarily answered "no." There was nothing to make us regard the man as even approximately recovered, while every symptom indicated that if he attempted to bear the burden of office, he would inevitably relapse. He did relapse and died in the course of a year.

Another medico-legal point arises in cases of theft and the breaking of certain moral and civil laws. It is important that in such cases the disease should be recognized in its early stage. Such individuals without any real motive and in a purposeless way which is difficult to describe, will steal objects which they do not require. The patient simply takes the article from the counter, slips it into his pocket, perhaps shows it to some one on the street, and the next day does not know where he obtained it, or what has become of it. Such persons have been

sent to jail, I believe, although not within my observation. Sexual crimes are much more common—or, at least, attempts at sexual crimes. One patient in this city made improper advances and indecent proposals to young school girls on the street at the noon hour. Of course great scandal and mortification may arise from this very common tendency in the general paretic.

COMMUNICATIONS.

ON THE CARE OF EYES DURING INFANCY AND CHILDHOOD.

BY J. WALTER PARK, M.. D.,

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The care of eyes during infancy and childhood is a subject of very great importance, and one which in the majority of medical journals has not received the attention by ophthalmologists that it should have received. There is at present considerable written upon a great many ophthalmological topics, but genarally most of them are written for journals devoted entirely to eye work, and it is very seldom that the general practitioner subscribes to journals which are intended for specialists, and the result is that he is, as a rule, not well posted upon the latest and best line of treatment in ordinary diseases of the eyes with which he comes in contact, in his general practice. For this reason I have taken the liberty of addressing a few words of advice to the general practitioner which if observed and carried out will, I hope, repay the time and labor spent in so doing. Blindness among children is becoming so prevalent that National legislation for its prevention is being urged as a necessity by a great many Medical Societies throughout the world.

Sanitary and antiseptic measures are as essential to the scientific treatment of diseases of the eyes, as antiseptics are to the successful practice of surgery. The physician who now neglects asepsis as well as antiseptics, in the treatment of diseases of the eyes, will undoubtedly be held accountable by the laity in general as well as by the profession at large, for all cases of blindness resulting from such wilful neglect of these precautionary measures. Ignorance on the part of the attending physician or nurse in the present age of advancement will not excuse them anymore. Infancy and childhood suggests a division into two periods. 1st, the period of infancy, 2d, the period of childhood. An infant is considered as such from the time it is born until it begins to walk, which is from one to two years. The first two weeks of an infant's life are the most important of its entire existence, and require the most careful attention upon the part of the physician and nurse; more so than at any other time of its life. I have reference to the lying-in period. It is a common occurrence for a mother to bring her child to my office, accompanied by a letter from her family physician, for a consultation as regards her child's eyes, which, she says, have been nearly or entirely blind since her confinement, when, she says, the child had very sore eyes from a cold it caught about that time, when the sole cause was that much dreaded disease, ophthalmia neonatorum.

The prophylactic measures which give the best results during the "lying-in time" and which should be followed out by the physician or nurse, are as follows: Immediately after the birth of the child carefully cleanse its eyes with absorbent cotton, carefully removing all secretions from them, then again with cotton saturated with 1–10,000 bichloride solution, or weak boracic acid lotion. After handing the child to the nurse, (which should be a trained one, or the physician should do it himself) to be washed, she should first wash its eyes (without the use of soap) with a pipette, by carefully separating the eyelids, and in like manner with either of the above antiseptic lotions. This is done for a double purpose; first, to prevent any catarrhal condition of the eyes which so often arises from a lack of these precautionary measures. Secondly, to prevent ophthalmia neonatorum, the disease which produces so much blindness among children, and yet when the proper precautionary measures are taken, the percentage of cases is small, and the results good, comparatively speaking. Should a case occur, however, of all the various methods of treatment which I have employed, that of Prof. Meyer, of Paris, has been the most efficient. This mode of treatment is as follows: I take a tiny stick (a burnt match end answers very well) with some absorbent cotton wrapped around the one end of it and saturated with a 1–3.000 bichloride of mercury solution combined with a weak boracic acid lotion, make a

thorough sweep in under both lids, being careful to extend well up in under the upper lid, and in like manner in under the lower one. This should be done for about three successive days, after which the profuse discharge generally ceases and it should then be treated as an ordinary case of conjunctivitis, with argentum nit, and boracic acid lotions. The majority of cases if treated in this manner will get well in from one to two weeks. The time and good results gained by this method of treatment is accomplished by the entire wiping away and destruction by antisepsis of all the micrococci (which is the accepted theory of ophthalmia neonatorum, it being the same as in gonorrhœa,) in about three applications, which is not accomplished so quickly by any other method to my knowledge. I wish to lay particular stress upon going well up in under the lid when making the applications with the cotton on the stick. Frequently some hæmorrhage will follow these applications, but not sufficient to interfere with the good results obtained, or to warrant a discontinuance of the same. I have never had a case more than two weeks until it was discharged well, and most of the time only eight to ten days.

After the "lying-in" period and the child comes under the sole charge of the mother, a few words as regards protecting its eyes from bright lights, etc., will not be amiss at this juncture. When it is taken out for a carriage drive, never have it face a bright sun or electric light for any length of time without having its eyes protected. Dr. David Little, of Manchester, Eng., cites a case of retinitis, and also one of blepharopasia, due to these causes. Snell, of Sheffield, speaks of a case of partial blindness resulting from the reflection of the sun upon the eyes by a reflector while passing along the street. Swanzy, of Dublin also mentions a case of central amblyopia in a gentleman due to a long carriage ride facing the sun, without any protection to his eyes. Never have a child lying in its cradle, or crib, facing a bright light when it can otherwise be avoided, and likewise protect them from draughts of cold air, dust, etc. When giving a child its bath, do not use any soap in washing its eyes. Use clean tepid water, rubbing gently over the eyeball so as not to produce any pressure, and thus prevent an accident which has occurred occasionally viz., dislocation of the lens. Work of that kind should only be entrusted to a good nurse when the mother cannot do it herself. Ptosis or dropping of the eyelids is sometimes noticed in children and is generally due to some irritation of the nervous centres, which by receiving proper treatment, restores the lids to their natural positions. A permanent paralytic condition requires operative measures to remedy the defect. Among the more frequent inflammatory diseases of the eyes of children is catarrhal conjunctivitis, and should be treated with the ordinary boracic lotions, thorough antisepsis, and soothing emolients to the edges of the lids to prevent them from adhering during the night, and prevent incrudations.

A habit which is still in vogue among mid-wives and some practitioners, is that of ordering the child's eyes to be washed frequently with the "mother's milk"; it is useless to say that such modes of treatment are now only practiced by charlatans, and should be discarded. Another frequent and very troublesome disease of children is phlyctænular keratitis and conjunctivitis, and is readily recognized by the small phlyctens occurring in multiple numbers, and mostly at the margin of the cornea in the conjunctiva, and sometimes on the cornea as well. Boracic lotions, and an ointment of atropine and yellow oxide of mercury applied to edge of lids, and a small quantity in the eyes will soon cure these cases. Its frequency of recurrence necessitates the treatment to be kept up for some time after the child seems apparently well.

The exanthematous fevers are all prone to cause the various ophthalmias, especially measles, also scarlet fever, variola, etc. The hygienic surroundings of all patients having any of these fevers should be of the best. Thorough cleanliness in every respect should be a daily command by the attending nurses. As soon as any form of ophthalmia appears, treat it at once. Antiseptic bathing of the eyes every few hours, cooling lotions, shielding them from bright lights, carefully removing all crusts from lids and applying soothing ointments is advised in all such cases. Any strumous condition of children should always have prompt medical attention, so as to prevent these various forms of ophthalmias which are so apt to prevail among that class. The over crowding of children in tenement houses in the various sections of cities, with a lack of sanitary precautionary measures are also prolific causes of these infectious diseases. One of the most horrible and contagious diseases due to the same cause is, trachoma, or granular conjunctivitis. Too much emphasis cannot be put upon the proper hygienic management of such patients, for by the intelligent

management of all such cases we can generally prevent a spreading of the disease when it first makes its appearance. When a case of trachoma occurs in a family of children the patient should at once be isolated from the rest. This is very often neglected, especially in Homes for Orphan Children, and the result is an epidemic of this intractable disease. It is also quite frequently found in public schools, and unfortunately they are allowed very often, to keep on attending school, intermingling among the rest of the scholars, using the same towels, etc., which of course should be strictly forbidden.

After isolation, treatment should be begun at once. All the aseptic and antiseptic treatments previously mentioned are applicable in these cases. The exclusive use of their own wash basins, towels, etc., should be strictly adhered to. Antiseptic soaps, such as "Stiefels," and others similar in composition, are excellent to wash their hands and eyelids with. Children should not be allowed to return to school until a responsible oculist certifies that they are entirely well. Never entrust the care of children to a "nurse girl" who has any form of ophthalmia, until you are certain it is no contagious disease. The medical treatment of trachoma or granular conjunctivitis is so varied in the different stages and forms of the disease, that to discuss an outline of treatment would be exhaustive and superfluous in a paper of this kind; but I will here remark, however, that they should always be under the care of a skilled oculist, or one thoroughly versed in the treatment of such cases. Much time and suffering can be saved when properly treated in the initial states. Spring catarrh, or what is more generally known as "Pink eye," is also a contagious disease and is under the same strict hygienic injunctions as all the rest of the contagious ophthalmias. If no precautionary measures are taken it soon becomes epidemic and is generally a very intractable disease to treat, unless taken in its very earliest stages. It generally yields nicely to the usual boracic and bichloride lotions; sometimes, however, it requires applications of 1 per cent. solutions of argentum nit. in addition to the above lotions. The next most important time of a child's life in regard to its eyes, are its school days. According to a very eminent authority on nervous diseases "no child should be sent to school before it is eight years of age," for various physical, as well as ophthalmological reasons. The ophthalmological reasons are, that a child's eyes are not fully developed yet, nor do the several coats of the eye have the same amount of elasticity to resist the severe strain put upon them in the constant convergence as they have at the age of 8 to 10 years. It is a mistake in parents who desire to have their children mentally developed at the age of 8 years, that they should have at the age of twelve. The further advanced a child is in its studies, the more its parents are pleased never thinking that this advancement is always incurred at the expense of a great deal of muscular strain upon the ciliary and recti-muscles which always has a deleterious effect upon the ocular coats when the eyes are excessively used, and especially so, at an early age. Myopia and all its consequences, as well as all the symptoms concomitant with eye strain, such as, headaches, dimness of vision for distant and near objects, blurring of type, epiphora, blepharospasm, blepharitis and conjunctivitis may all be brought on by too early, and excessive use of the eyes, and which can generally be prevented by the proper precautionary measures, in that direction. The majority of children are slightly hypermetropic when born, but very frequently become myopic after some years of close application to their studies. A studious child may by continuous, and excessive use of its eyes bring on myopia, notwithstanding that it is hyperopic to the extent of about one dioptre. This is brought about by the continued convergence required at near work, by which an undue amount of tension is produced upon the sides of the eye-balls, and thus causing their elongation in their antero-posterior diameters which is always the case in myopic eyes. Half day sessions of school of 3 hours each, is sufficient time for children to use their eyes at their studies until they are ten years of age. While at school or at home they should always be taught to hold their books as far off as possible, consistent with good vision. Alternating, periodic and constant strabismus is generally due to hypermetropia, which if corrected by proper lenses will effect a cure, and prevent a permanent strabismus, which generally is the result. If it remains uncorrected it will then require operative treatment. If a high degree of hypermetropia exists, and a squint of 20 to 30 degrees, you should correct all of the hypermetropia under full mydriasis, and after having it corrected for 3 or 4 years, and there still remains a strabismus of ten degrees or more, you may be obliged to perform a tenotomy or advancement of one of the recti-muscles. This should be done for

two reasons: First, to save the eye from becoming amblyopic, and second, for the aid it renders the other eye in bin-ocular vision, as well as cosmetic appearances. I have known a case of squint of 20 degrees convergence entirely cured by a continuous course of atropinigation of both eyes, and all refractive errors fully corrected. There are a very great many cases of strabismus of 15 to 20 degrees convergence operated upon for the mere sake of having it said that they operated on such a case, and in the majority of them the result is worse than if left alone. All such cases should first have a thorough trial of correcting lenses, when we know the defect is due to refractive errors.

As soon as a child complains of headaches, blurring of type, epiphora, dimness of vision for near as well as distant objects, and a congested condition of the eyes, it should immediately be stopped from all near work, and be examined by some responsible oculist and have such treatment as he may direct. Traumatic injuries to the eyes are of frequent occurrence, and none more dangerous than the ones produced by playing the game so much indulged in by children, and generally known as "Catty," or "Knip." It should be prohibited by law, as many an eye is destroyed by a "Catty" or "Knip." Hæmorrhages into any part of the eye, especially those occurring in the anterior chamber, vitreous, and retinæ, should have prompt attention. They are frequently produced by blows from sticks, a slap of the hand over the face and eyes, throwing of balls, falls, and sometimes by school teachers throwing rules, &c. at children in the school room. They usually absorb, and comparatively good results are obtained by leeches, purgatives and alterative treatment. Should a hæmor, rhage occur in the muscular region, blindness generally is the result. Much more might be said upon this subject by taking it up more in detail, but to the general and busy practitioner a general review of the more important points are sufficient, and I trust may be of some value to all who may take the time to read them.

SWEDISH MOVEMENT CURE. *

BY DR. HENRIC SPARRE,

MILWAUKEE, WIS.

There cannot be anything of greater importance than the human system for the maintainance of good health, than normal blood circulation and rich blood.

To understand that it is impossible to control these, we must investigate the forces that accomplish it.

We will divide that which takes place in the human body into Cause and Effect. The nerve centers furnish the motive power, and their ability to continue with this depends upon their receiving nutriment from the blood in equal proportions of expenditure. The remaining portions are a combination of effects, brought about in an absolutely mechanical manner.

Some of these nerve forces are, as we know, controlled by our will, others are perpetual through life. Notwithstanding, both are subject to that mentioned above. None are able to continue furnishing necessary motive power without receiving their normal share of nutriment from the blood, and carrying off the used up parts through their proper channels. The venous blood absorbs and carries off the waste, and the arterial blood (through blood corpuscles) furnishes the material for new formation. This is done mechanically. You will readily perceive that if we control the circulation and undertake contractions and expansions of muscles, we also control nutrition and absorption. The heart is the organ that keeps the blood circulating, aided by the activity of the greatest part of the human body. Nature has wisely arranged that through the activity, the nutriment and absorption are materially increased. Absorption is a mechanical consequence of the speed of the venous circulation and in direct proportion to it. Diminished speed, diminished absorption, viz., congestion.

By mechanically forcing the blood in the main vessels, which, as tributaries, take up those where the congestion exists, and preventing its return, if the vessel is not provided with valves, will force its filling from below, and as a natural consequence, cause the blood in the congested tributaries to move faster.

Absorption normally restored and maintained, it can only be a matter of short duration until consequences of congestion are entirely removed.

There cannot be congestion in one place without causing checked arterial circulation. The restored circulation in the congested veins will admit the arterial blood. To illustrate, by swinging the feet actively circulation is increased, but the power required in performing it will soon cause exhaustion, which proves that an immense amount of nerve force is expended. If the person re-

* Read before the Milwaukee Medical Society, June 23, 1891.

clines and another scientifically twists the feet, better results will be obtained without any expenditure of nerve force. This is the principle of my profession in treating nervous and functional debility.

The importance of normal circulation for producing the blood is evident, and there is only one important feature of the process upon which the circulation has less influence, viz., assimilation. And there is not one that we can control as thoroughly by scientific manipulations, bringing the epithel in contact with the contents of the intestines, materially increasing the amount of chyle obtained. The functions of the spleen, whatever they are, and the usefulness of the pancreas and liver will unquestionably be aided by normal circulation of blood through them.

We have now come to another process of the utmost importance for the system, the discharging of refuse.

We can aid materially the action of the lungs, and in increasing that portion of the capillary circulation that brings the blood in connection with the pores, the exhalation is materially improved.

We can aid the kidneys by preventing congestion, or removing it if it has taken place, and in restoring circulation to the bowels. We can produce passage if the forces that induce the peristaltic motions are nearly or entirely exhausted, and with continued aid, the exhausted parts will have time to recuperate.

If there are local disorders in the circulation, they can be restored by applying former principles.

The diagnosis reveals the aid required to remove the cause of the disorder. The effect of movements and manipulations tells the experienced practitioner with what combination of movements, or manipulations that effect will be produced. As rarely anything can be done in aiding nature that has not more than one effect, some of which may be detrimental, counteracting manipulations must immediately follow to neutralize them, without interfering with the others.

The general impression of the medical profession seems to be that my treatment is good only for muscular development. We certainly can develop muscles, but does not this indicate that we can increase nutrition and absorption? In fact, we use the muscles to aid us in controlling the blood circulation in other parts. By undertaking the functions of the controlling muscle or muscles, we can reduce the effect of contraction and expansion to only one muscle or set of muscles and thereby regulate the circulation in the vessels within and through them, their branches and tributaries.

There are positive requirements to enable intelligent treatment of human ailments. Thorough knowledge of anatomy, physiology, the nature of the disorder and cause of the disturbance; and in my profession also the distinct effect of manipulations in every condition.

The English name "Swedish Movements" is misleading. There do not exist decided schemes of movements for treating diseases. Every case demands individual treatment. To illustrate, I mention the fact that in the Central Institution in Stockholm where the record is kept of movements used, the number from 1834 to 1885 exceeds 16,000, and few weeks elapse when cases do not come to me for treatment that call for movements I have not seen nor thought of before.

It is essential to closely watch the effect of treatment, to discover if desired effects result, as it verifies or disproves the diagnosis; and as different stages require change of treatment. I can refer to one case which required 42 schemes of treatment before the cure was effected.

Massage or "to rub" is simply four ways of rubbing, very efficient to aid in removing swellings of the joints, and increase capillary circulation on the surface, if scientifically performed.

A CASE OF COLOTOMY.

BY BENJ. W. WHITE, M. D.,
BRIDGEPORT, CONN.

In this short description of a case of colotomy, I shall not attempt to describe the various operations and their methods of performance, or detail the circumstances under which such a procedure might seem justifiable. But will only refer to a few points which may serve as a subject for your discussion of the merits of this operation.

CASE I.—The patient, a female, aged 53, married, but who had never borne children consulted me February 8, 1891, with reference to a growth in her abdomen. Her health had not been good for five years; having suffered more or less from constipation, dyspepsia and headaches, but had not noticed the abdominal growth until a few days prior to my seeing her. At the request of the patient, Dr. Lauder was called in consultation, and we established the diagnosis

of carcinoma involving the uterus, rectum, posterior wall of the bladder, vagina, and broad ligaments. The patient's condition rapidly grew worse until March 1, when marked stenosis of the rectum occurred, and the passage of fæces was only accomplished by partial dilation. At this stage colotomy was proposed and declined, and I was obliged to employ the best means I could to control persistent and severe vomiting. The use of the various drugs and hypodermic syringe did not achieve much in our favor. Meanwhile the rectal occlusion was becoming more complete, and on the 14th instant closed the passage, and nothing escaped from the bowels until the intestine was incised one week later (March 21st). At this time the patient's condition was not very favorable for operation; but with her consent and the valuable assistance of Drs. Young and Cowell I opened the intestine in the left inguinal region after the method of Littre. It was my intention to stitch the gut to the margin of the wound and leave it until the next day before opening it, but adhesions were so numerous and dense that while endeavoring to lift the loop of intestine up into the wound that portion which was grasped with the forceps was felt to give way and had to be closed with a clamp which was fastened and left in the wound until the next day, when it was removed and a good opening which allowed the passage of gas and fæces, was established. The patient rallied very well from her state of shock and lived twenty three days after the operation. During these twenty-three days her bowels moved daily, the nausea and vomiting lessened, the distress caused by flatus disappeared, and her temperature remained below a hundred degrees.

My reasons for operating in this case were:

1. To give the patient an opening through which to get rid of her intestinal contents.

2. To relieve vomiting and abdominal distension, and to make life more bearable while she did exist.

The cause of death in this case was exhaustion from lack of nutrition.

ACUTE DISEASES OF THE MIDDLE EAR.[1]

BY H. M. DUNLAP, M. D.

BATTLE CREEK, MICH.

Mr. Chairman and Gentlemen of the Section; I feel somewhat out of place in presenting this subject before you who are mostly older than myself both in experience and in years; however, the importance of the subject, together with the fact that it receives so little attention, not only from the general practitioner but from most specialists as well, justifies me, I think, in calling your attention to it on this occasion.

I am not here to present any new ideas or methods of treatment, nor yet to give my own experience in this branch of medicine. My only object is to stimulate a deeper interest in this branch of the healing art. There is no line of work in medicine which is so much neglected or little understood by the general practitioner as diseases of the ear, and I dare say there are comparatively few who have a thorough knowledge of even the anatomy of this organ.

There is no cause that needs apostles more than otology. We have gynæcologists by the score, we have surgeons and ophthalmologists, all of whom are working nobly for the benefit of suffering humanity. But where are the aurists? It is true that most of us print our cards with "Oculist and Aurist," but how many of us give half the time and attention to the ear that we do to the eyes?

It may be urged that the treatment of diseases of the eye give satisfactory and even brilliant results; that the cases of ear affection who come to us are chronic and yield very unsatisfactory results to treatment. All this, I admit to be true in a majority of cases, and it is this fact that urges upon us the duty of educating, not only the profession, but also the laymen in the importance of attending to the acute diseases of the ear and thus prevent a great many of the chronic ones to say nothing of the suffering that may be alleviated.

The acute diseases of the middle ear are not numerous and for our present consideration we may confine ourselves to the acute inflammations of the tympanum, together with the disturbances which usually accompany them. The different varieties of inflammation of the tympanum usually given by writers, such as simple catarrhal, purulent, suppurative, etc. are really only a difference in intensity and not in type, so that for convenience we may confine ourselves to the simple term "Acute Inflammation."

A question of interest to us here, is, are there serious results liable to develop from acute otitis media if left to run its course unmolested? I might, with equal propriety, ask if there is danger of serious results in a case of ophthalmia neonatorum if neglected? What would you think of a doctor who

[1] Read before the Michigan State Medical Society, June, 1891.

would say in such a case, "Well, suppuration is bound to come any way it and will get better after that," and not use the remedies which are known to be of great benefit in those cases, or who even failed to make use of one of nature's greatest remedies—warm water for cleansing purposes? We would even hold parents responsible in such a case for, at least, keeping the eyes cleansed, if they had no directions from a physician at all.

But how is it in the case of otitis media? The child, if old enough, complains of earache. This symptom alone in 90 per cent. of cases is an indication of inflammation and should receive attention. But the parent thinks it is only an earache and it will get well in a day or so, and even doctors are sometimes guilty of looking at it in the same light; perhaps some sweet oil and laudanum is dropped in the ear or a little tobacco smoke blown in and no investigation is made of the drum head, which in a great majority of cases would give positive evidence of the condition of the tympanum. Could we consider our duty done in the supposed case of ophthalmia, if we failed to expose the cornea and ascertain its condition? Just so, I hold, we are responsible if we fail to investigate the condition of the ear with equal care. It is just as easily done, and if it were ten times as difficult that would not excuse us from the duty.

In the former case, the danger is that of impairment or loss of function or possibly of the globe itself. In the latter case we have these same dangers and added to them, that of danger to life itself. It is unnecessary for me to consume your time with a description of the anatomical relations of the middle ear. It will suffice to mention some of the important structures in close proximity to this organ; viz., brain and meninges, internal carotid artery, vestibule and cochler, seventh nerve and mastoid cells. A consideration of these parts led Prof. Politzer to remark that, "The tympanum is bounded on the outside by the drum head and on the inside by death." What are the results that may follow acute inflammation of the tympanic cavity? It is true that many cases go on to an apparent spontaneous recovery without suppuration or rupture of the membrana tympani. It is also true that many of them do suppurate and perforate and may then recover without much impairment of function, but, on the other hand, many of them terminate in chronic suppuration with constant danger of acute attacks, which may involve important surrounding structures, to say nothing of the constant annoyance the patient has to bear. But let us go back to those milder cases, which we say have terminated in resolution, and see what becomes of some of them. The attack may be very mild, terminating in a few days. Perhaps the little patient has a naso-pharyngeal catarrh, and two or three times a year has an acute attack of rhintis or pharyngitis, which are also neglected as in the chronic trouble, and with each exacerbation of the throat disease there is also a congestion or mild inflammation in the ear, which also in time becomes chronic with obstruction of the Eustachian tubes and we have developed that disease we so frequently see viz., *Dry catarrh of the middle ear.*

One may say how could this have been prevented? I answer by asking how do we prevent trachoma following an acute ophthalmia? Is it not by judicious treatment of the acute affection? Just so in the case of the ear; in the acute stage we can use warm or hot water douches, and general antiphlogistic treatment and in severe leeching of tragus, and sedatives, and as the acute symptoms disappear, use inflation by Politzer's method, or any other good one, and at the same time apply appropriate treatment to the throat and nose.

It is not, however, my design to give details of treatment as this can be readily obtained from books if we are sufficiently interested to look up the subject. How can we bring about an improvement in this branch of our profession? As I intimated in the beginning, it can only be done by education. *First,* we must educate ourselves to look upon the organ of hearing as one worthy of our careful consideration and attention. It is true there may not be opportunities for brilliant results such as are afforded in some other branches. But our aim is not always to achieve great things; but to do well the small duties if we can thereby benefit suffering humanity.

How far and in what way must we proceed in our endeavors in this direction? It is evident that upon the specialist rests the first burden of the work. I believe it is our duty, upon every opportunity to impress upon our brother general practitioners the necessity of giving more attention to this work. They are the ones that come in contact with the families in their homes. They have charge of the little patients during the acute diseases with which inflammation of the middle ear is so likely to occur. They are able to teach parents the necessity and importance of giving attention to the sup-

posed dangerous earache, etc. The greatest stupidity is manifested among some of the lower classes in our large cities. One expression frequently used is, "there is no danger so long as the ear does not bleed."

In a report from eleven institutes, where especial attention is given to ear treatment in the cities of this country and of Europe, only one out of seven of the cases admitted was an acute malady. This shows how little attention is given to this matter by the people themselves. Probably the experience of every practitioner indicates the same heedlessness.

In conclusion let me urge upon each one the importance of doing what he can to bring the laity and profession as well to look upon this subject in its proper light. We have educated the people to take some care of their eyes and are very careful to correct errors of refraction, etc. This shows what can be done in other lines if we will only do our full duty, and labor to advance the science of medicine and its usefulness.

Special Correspondence.

A LETTER FROM BERLIN.

As Berlin has in recent years, developed as a medical centre of considerable importance; and has become conspicuously noteworthy, because of the discoveries of Koch, with the announcement within a few months, that he had found a remedy which exercised a curative action on tuberculosis, a few words in things medical, may not be without interest to the brethren in America.

Berlin is one of the cities, *par excellence*, in which the antiseptic theory was unconditionally accepted. But, alas! for human progress; Listerism, or even orthodox antiseptics, is thoroughly dead as far as Berlin is concerned. And, with the solitary exception of Koch, himself; who has three wards, in which he yet is continuing his investigations, at the Moabit Hospital, nobody here pretends to cure any species of tuberculosis with the lymph!

It appears, that even Von Burguran who was one of the most ardent advocates of the Koch treatment, has now, wholly discarded it, and, from the free manner in which I saw the mercurial oleates employed in these lupus patients, it would seem a question; which was effecting the cure; the mercury or the lymph.

In this connection, I might say, that while in Ireland I saw six cases of lupus, in the service of Dr. James Brown, in the South County Hospital, City of Dundalk. In all cases, the temperature chart showed well marked re-action at the time of inoculation. In all, there were too, well marked local changes in the ulcers. In many, the sores cicatrized over. Yet, in every instance, within two months after apparent cure, the ulcers broke out afresh.

Considering the rather questionable manner in which this mysterious medicament was withheld from the profession, and its elaboration and precise nature kept secret, until it was practically proven a failure, few will have the regrets which they might otherwise experience at the premature demise, of what promised to be, one of the greatest boons ever conferred on suffering humanity.

When one enters an operating room here, and sees the porcelained brick walls, polished and marbleized floors, glass tables, and numerous sterilizing ovens, he naturally asks himself; what has become of antiseptics?

Antiseptics are now seldom employed here, except in fœtid wounds, or where purulent changes are progressing; never in the cavity of the peritoneum.

The word now is vigorous asepsis. But there is danger, even with this, that it may be brought into disrepute, by young, inexperienced, and over enthusiastic operators, in carrying it to an absurd extent.

It, however, is an immense gain, to be able to dispense, at least, in part, to get rid of the slopping and splashing, inseparably connected with antiseptic douching and flushing, not only to the inconvenience of the operator, but to the peril of the patient; who has his body often chilled, in the performance of the tedious time-consuming operation, to which layer after layer of wet towels are spread over his bare integuments. The Berlin Hospitals, large and small, are all constructed on the pavilion plan. This arrangement is most conspicuously carried out at the Moabit Hospital, which covers more than ten acres of ground, consisting of thirty-two pavilions; each containing from thirty to forty patients. They are long, rather wide, with low, tarred paper roofs, and hard, smooth, stony floors. There are no cellars under them. They are well lighted and ventilated, and stand about forty feet apart. The group takes the shape of a horse shoe, with a large shaded yard for an area.

One can conceive many reasons why those isolated structures are not desirable, as serving the purpose of a general hospital, independent of economical grounds. For it is well known, that low-roofed buildings are very warm in summer, and very cold in winter; and are extremely difficult to heat and ventilate.

The ideal hospital is at Frederick's-Hain, a suburb of Berlin, in which the widowed Empress of the late Emperor, is actively interested. The operating theatre is a marvel of beauty. This hospital is U-shaped too. It consists of seven separate buildings, which, with their extensive grounds, are all walled in. A large proportion of the patients are very young children. Here, as in the large Bethanian hospital, they have dispensed with intubation of the larynx altogether, and have gone back to tracheotomy.

I saw three little patients in the diphtheria-pavilion with tubes in their trachæ. Steam is applied to their throats direct from the main supply, being conducted to the little patients in long narrow rubber tubes. This hospital is ventilated by indirect radiation. The air entering from above and passing out again close to the floor. I saw a hospital similarly constructed in Tewksbury, Massachusetts, not long since. This is the only possible effective system of ventilation, in large apartments warmed in winter by transmitted heat. The hospital arrangements here are excellent. The surgeons informed me that they have an abundance of everything in the way of supplies for dressings. The sick are nursed by orderlies and nurses. The latter serve from six months to a year, in learning, and then have to give in return three years after they have completed their novitiate.

The Bethelem hospital, controlled and owned by a Protestant order of nuns, is a fine institution. It occupies an extensive area, within the mural confines of which are nine separate buildings. By Dr. Holl, the chief of the surgical division, I was given a long opportunity to examine patients and make inquiries. I was quite surprised at the number of ununited fractured femora here after treatment. It occurs, I am informed, quite as often in the young and vigorous as with the old and decrepit. It is a favorite custom with them to apply starch-bandages on any sort of flesh wound to the extremities. They claim that it gives firmness and comfort to the parts, until the healing processes are complete. As a rule, they never apply the gypsum bandage until, at least one week has elapsed after the fracture. I was convinced that this is a move in the right direction. They first subdue all congestive and inflammatory action before the plaster-bandage is adjusted.

I saw three of Mikulitz's resection of the astragalus here. One had been in the hospital three years. There was bony anchylosis in none of them, and I was confirmed in my impression of the general uselessness of the operation in scrofulous disease of the ankle-joint, by these cases.

National prejudices die hard. Notwithstanding the generally admitted opinion that ether anæsthesia is the safest, yet they still use chloroform in Berlin, and, very seldom anything else.

No doubt Berlin must continue a great medical centre for some time for Germans and German speaking Americans. But for those in America, unfamiliar with the language, they may stop at the British Isles, at London, Dublin or Edinburgh, cities which have provided members of the medical profession whose names will go into immortality.

THOMAS H. MANLEY, M. D.
Berlin, August 10th, 1891.

SELECTED FORMULÆ.

ACUTE ARTICULAR RHEUMATISM.

Hatfield speaks well of the following liniment as a local sedative to the affected joints:

℞ Ol. gaultheriæ.....f℥ ss.
Spirit. chloroform.....f℥ ss.
Lin. saponis.....f℥ iij.
M. Sig. Apply freely and wrap the joint in cotton batting.—*Dis. of Chil.*

Internally the following may be given:

℞ Sodii bicarb.....℥ ij.
Sodii salicylat.....℥ ij.
Aquæ menth. pip.....f℥ iij.
M. Sig. f℥ij. every three or four hours.

The above formulæ seldom causes any nausea, as the salicylate is apt to do when given in syrup. The soda should be omitted when the urine becomes alkaline.—*Powell, Ess. Dis. Children.*

IRRITATING EYE-WASHES.

Franke (*Deutsche Med. Zeit.*) calls attention to the fact, that the installation of solutions of atropin, eserin and cocaine into the eye frequently gives rise to acute conjunctivitis. The reason of this is that these solutions are not antiseptic and generally contain mould or fungi. If these remedies are added in the desired proportion to a 1 : 10,000 solution of bichloride of mercury, they

will be kept antiseptic for an indefinite period, and not give rise to any irritative symptoms.

INHALATION IN WHOOPING-COUGH.

℞
Thymolis..... gr. xx.
Acid carbolicis.
Ol. sassafragis.
Ol. eucalyptus.
Picis liquidæ.
Ol. terebinthinæ, aa.....f℥ ij.
Ætheris.....f℥ iv.
Alcoholis, q. s. ad.....f℥ iij.

M. Sig. Put about 30 drops upon a pad of such size as to be conveniently hung around the child's neck, renewing the application every two or three hours.

In severe cases the inhalation treatment is supplemented by the internal administration of

℞
Acid carbolicis.....gr. iij.
Sodii bromid.....gr. lx.
Tinct. belladonæ.....gtt. xx.
Glycerinæ.....f℥ iij.
Aquæ, q. s.....f℥ ij.

M. Sig. f℥ij occasionally for a child 3 or 4 years of age.

—Jour. Amer. Med. Assn., from Dr. Beall Daniel's Med. Jour.

ASTHMA.

The following prescription is claimed by Dr. Brubaker to have a greatly beneficial effect in asthma:

℞
Liquor potassii arsenitis.....gtt. ij.
Potassi iodidii.....gtt. x.
Syrup. tolu
Aquæ, aa.....f℥ ss.

M. Sig. This dose t. d.

LUPUS ERYTHEMATOSUS.

℞
Zinci sulphatis.....℥ ss.
Potassi sulphureti.....℥ ss.
Aquæ rosæ.....f℥iij ss.
Alcoholis.....f℥ iij.

M. Sig. Mop on morning and evening for ten or more minutes at a time.

—Courier of Med.

ACUTE GASTRO-ENTERITIS.

℞
Creolin.....gtt. iij.
Cinnamon water.....gtt. lxxv.
Syrup marshmallow.....gtt. xxij.

M. Sig. Teaspoonful every hour for very young children.

—Schwinz.

Morris recommends the following:

℞
Bismuth subnit.....℥ jss.
Salol.....gr. xvj.
Menthol.....gr v.
Aq. destil, q. s. ad.....f℥ ij.

M. Sig. f℥j three or four times a day for child one or two years old. An occasional dose of Dover's powder added to the above when the bowels are too loose.

—Daniel's Med. Jour., June, 1891.

CREOLIN IN ERYSIPELAS AND ECZEMA.

Dr. Rothe has used in the treatment of erysipelas a creolin ointment containing—

℞
Creolin.....1½ parts.
Creta præp., axung. porc., aa...15 "
Ol. menth. pip.....gtt v.

This is spread in the thickness of the blade of a knife over the diseased parts two or three times a day, a thin layer of cotton-wool being applied as a covering. In from twelve to twenty-four hours improvement was always apparent, and the disease was cured in three or four days. The same ointment also did good service in a case of weeping eczema of the face, as also in several cases of eczema in children. A patient suffering from scabies was treated with a thorough washing with soft soap and inunction of this ointment, with such a decided effect that Dr. Rothe considers creolin to be undoubtedly a specific for the disease.—*Brit. and Colo. Drug.*

POWDER FOR ATROPHIC RHINITIS.

Hall recommends the following in the treatment of atrophic rhinitis:

℞
Bicarbonate of sodium
Borate of sodium } of each..... gr. v.
White sugar.....gr. xij.

This is dissolved in two ounces of hot water and snuffed into the nostril thoroughly. After this has been employed to loosen any secretion which may remain, intra-nasal instillations of weak solutions of alum, in the strength of 1 per cent., or in other cases sulphate of zinc, nitrate of silver, or powdered iodoform, or aristol, or salol, or boracic acid, are useful. After these applications it is well to apply to the mucous membrane of the nasal cavity a spray of eucalyptus as follows:

℞
Vaselin.....℥ij.
Essence of eucalyptus.....f℥j.

In other cases it is only necessary to spray the nostrils with liquid vaseline.—*News.*

SYPHILITIC ULCERS.

In *La Semaine Médicale,* the following prescriptions are given for the treatment of syphilitic ulcers:

℞
Salicylate of mercury
Carbonate of potassium } of each....gr. xv.
Distilled water.....f℥ vj.

Apply to the part by means of compresses, or if an ointment is preferred, the following may be used:

℞
Salicylate of mercury.....gr. xv.
Vaseline.....℥ j.

Mix and use externally.

OINTMENT FOR COMEDONES.

The *Canadian Pharmaceutical Jour.* quotes the following prescription, said to be used by Unna in the treatment of comedones:

℞
Solution of hydrogen peroxide.....f℥ij.
Vaselin.....℥ij.
Lanolin.....℥j.
Acetic acid.....f℥j.

Mix and perfume.

THE
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EDWARD T. REICHERT, M. D.,
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EDITOR AND MANAGER.

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The Editor will be pleased to get medical news, but it is important that brevity and actual interest shall characterize communications intended for publication.

LEADING ARTICLE.

THE OBSTETRIC FORCEPS AND IDIOCY.

The relation between forceps delivery and idiocy, cerebral palsies, and various brain lesions, is one which has attracted much attention among obstetricians and neurologists. That these conditions do follow instrumental labor is well established, hence it is of interest to examine the subject, in order to draw practical lessons concerning the use of the forceps. Aside from gross lesions produced by pressure or crushing, the damage to the brain is usually brought about by intracranial hæmorrhage, or thrombosis. A great many idiots are the first-born of a family, and the majority are boys. According to Jacobi asphyxia plays an important role in the etiology. I. Langdon Brown showed that forty per cent. of the idiots who were first-born children had a history of asphyxia.

In the *American Journal of Obstetrics*, June 1891, Jacobi, in a very instructive article, points out the anatomical conditions present in a *neonatus* which favor the occurrence of hæmorrhage. The blood has less fibrin, less salt, less hæmaglobulin, less soluble albumen, less specific gravity, and more white corpuscles than the blood of advanced age. Although the proportion of the heart to the rest of the body is largest about the time of birth, the arterial pressure is low, which condition favors venous stasis, hæmorrhage, or thrombosis. The elastic membrane of the arteries of medium and small calibre is thin and simple, especially where actual branches are given off. This arrangement also favors hæmorrhage.

These facts so succinctly stated by Jacobi show the wisdom of the teachings of modern obstetrics concerning the conduct of labor. Prolonged labor is very dangerous for the fœtus. Asphyxia and death, or worse, asphyxia and idiocy, are real dangers. The danger increases with the pressure to which the head is subjected; as when there is a large head in a normal pelvis, or a normal head in a small pelvis. The broad rule that

the second stage of labor should be completed within two hours to insure the safety of mother and child, is not an absolute one, but is a safe guide, only to be disregarded under proper circumstances. When the second stage is tedious, or the head becomes arrested in the pelvis, the forceps should be applied; primarily to save the fœtus from asphyxia, and secondarily to save the mother from fistulæ.

On the other hand the wise obstetrician will ever bear in mind that the forceps is an instrument capable of harm, and that the harm is due largely to the carelessness or lack of skill of him that uses it. Injury or death may result to the fœtus from a faulty application of the forceps, and especially from violent efforts at traction. When the head is high up the advantages of Tarnien's axis-traction forceps should cause its employment. Less force need be used—because well-directed—and less injury will be done. It is to be hoped that stories of obstetricians "pulling with all their might," "bracing their feet against the bed," etc., will cease to be heard. Such methods are unnecessary, can only do harm, and hence are reprehensible.

Agitation of this subject can result only in good; for while it will deter some of small experience from using the forceps, it will prove a healthy correction to those who have been violently abusing them. A careful use of the forceps *secundém artem*, will seldom injure either mother or fœtus. While forceps extraction accomplished by violence, or a failure to resort to the forceps under proper indications will result in many deaths or "spoiled babies" through cerebral traumatism or asphyxia.

Correspondence.

COMMENTS ON DR. J. MADISON TAYLOR'S LETTER.

To the Editor Medical and Surgical Reporter:—It is rather surprising that Dr. J. Madison Taylor in closing his admirable letter in your journal of the 29th inst. should say, in speaking of the warped ideas of the too radical or too conservative physician—"That these matters right themselves if left alone is no more true than that the body rights its functions unassisted." Judging from his comments, in the early part of his letter, on the ancient but rational treatment of maimonides, and his own reputation as a physician he certainly could not have meant what he said in allowing nature to play such an unimportant role in the cure of diseased conditions of the body. All human beings demand some object to worship, to adore; from the savage Hottentot who bows down to his pile of stones, to your civilized enlightened man who reverently recites the Apostle's Creed. This spirit of worshipping the unknown, the uncomprehended is closely allied to the blind confidence human nature reposes in any vaunted remedy for the relief of human ills; and it matters not whether it is composed of charms, incantations, Christian Science or drugs. We can overlook these superstitions in the laity who know little or nothing of the human organism. But why any physician, educated and observing as they all ought to be, can have the self confidence, the audacity to claim that his medicines will cure without nature's potent assistance should be deprived of his title. Of every hundred cases that the doctor "*cures*" ninety-nine would have recovered without seeing a drug with the claims of a quicker convalescence.

It requires no elaborate theorizing to prove this. The fact that homœopathy does not claim a higher mortality, not so high in fact, in some diseases, as when "*medicine*" is given; and the hue and cry that follows the birth of every new drug, each with its coterie of followers as fickle as a Roman populace. "Now this *drug* was (?) incomparable; and the ensuing night made it a fool and beggar," which goes to prove that nature is the great leader even though handicapped by every drug in "The Heavens above or the earth beneath."

Nature may ask our assistance but rarely does she demand our meddling interference with her laws.

J. Newton Hunsberger.

BRASS MOULDERS' DISEASE.

Editor of the Medical and Surgical Reporter:—I should like to submit a short sketch of Brass Moulders' Disease which has come under my notice, and I earnestly request that all who have had any experience on the subject will answer the few brief questions at the end of this article.

H. B——, aged 42, farmer. Until the fall of 1875 perfectly robust and healthy. In the fall of '75 he began brass casting and for the first six months was troubled very much with colic, constipation, chills and fever and became much debilitated.

He suffered much from loss of appetite and indigestion. Chills and fever at intervals until '86, a period of ten years.

Patient continued the work for ten years or up to the above period, 1886. In March 1886, symptoms of numbness set in, beginning in right hand, which grew cold, extending to elbow. Later left arm became affected in same manner.

In July '86, patient quit work. Complained of complete loss of appetite and a peculiar sensation like a tremor running the length of spinal column, also had severe neuralgic pains in the head. For three months lived an out-door life on a farm. Result: much improved in health, symptoms had nearly disappeared.

Resumed work in October. Symptoms almost immediately began to return, accompanied with severe neuralgic pains beginning in the lower limbs, sharp shooting pains passing from heel to calf of leg and knee, sometimes continuing up the limbs by way of spine to head, pains shooting up from back part of head over crown. Constant insomnia. After severe attacks would leave left shoulder and arm numb, which would disappear under rest. Lower limbs affected in the same manner, though left side and right leg affected the most.

All symptoms aggravated by heavy lifting or prolonged exertion, becoming alleviated during rest.

Quit work again January '87, totally unfit for labor. Did but little work in shop for nearly two years. Symptoms again gradually disappeared as general health was improved, though they were never removed entirely. This period of two years, patient spent in travelling all over the continent and Europe, also part of the time working on the farm. In walking, patient constantly complained of a sensation of pulling or drawing from limbs to back which seemed to fetter the gait, and was aggravated by over exertion.

Resumed work October '89, continuing to December 1st, '90, a period of thirteen months, when he quit work with a return of all the symptoms with the addition that his right leg was swollen to the body.

Treatment.—Complete rest. Much of the time in bed, with light exercise.

Resumed work May '91, with improved health but not fully recovered. Since which time to the present, three months, patient has continued at work and is doing so at the present time.

Present condition normal, very little numbness of hands and arms, right hand and elbow being most affected, sleeps well, appetite not quite as good as when he went to work in December.

In conclusion I wish to hear from some of your legion of readers brief answers to the following questions:

1st. What is the prognosis as to the ultimate result if the patient continues his occupation?

2d. The usual life history. Cause of death, etc., if death occurs?

3d. Should the patient continue his occupation or ought he to be encouraged to give it up?

4th. Are there any medicines that will cure or prevent the disease?

Wm. H. Burr, M. D.
Burrville, Conn.

PERISCOPE.

THERAPEUTICS.

HOT INFUSION OF DIGITALIS IN THE TREATMENT OF PNEUMONIA.

Dr. E. P. Hershey, writes in the *Medical News* that during the past three months, excellent opportunity has been afforded him to test the value of the treatment of pneumonia by means of large and frequently-repeated doses of the infusion of digitalis, given early in the attack. The marked benefits resulting in a few cases thus treated last fall suggested its great importance and bolder use. In twenty cases, the treatment was commenced by the administration of ten grains of the mild chloride of mercury, together with a tablespoonful of the infusion of digitalis, given every hour, as hot as the patient could drink it. In from six to ten hours, profuse perspiration occurred in every case, followed in twelve cases by a normal temperature. In three instances, the temperature, without the use of any antipyretic, dropped to 100°, in four, to between 101° and 101.5°, and in one, to between 103° and 105.5°. In no case was the temperature below 103° when first seen, and in all but one, it was ushered in by a distinct rigor. In all the cases the characteristic rusty sputum was

present, but its short duration showed clearly that the inflammatory process had been cut short.

The severest case was that of G. J., a laborer, aged thirty-two, in whom there was violent delirium from the outset. The patient having felt ill for nearly twenty-four hours, had a violent chill at 4.30 P. M., February 25th. At 6 P. M. the thermometer showed a temperature of 105.5°; the pulse was 130. His attendants had him strapped to the bed. Crepitant rales were heard at the base and over the middle lobe of the right lung, anteriorily and posteriorily. The patient was given ten grains of calomel, followed in one hour and a half by a tablespoonful of a hot infusion of digitalis, the latter being repeated every hour, despite the fact that the temperature at 11 P. M. had fallen to 103°, at 5 A. M. to 101°, and the pulse to 115, with a general improvement of all the manifestations of delirium. At 6 A. M. there was profuse expectoration of rusty-colored sputum, that continued for twenty-four hours. On the third day the temperature returned to 105°; after active purging, it fell rapidly. On the morning of the fourth day the pulse had dropped to 50, the temperature to 96°. The infusion of digitalis was discontinued, and a combination of camphor, strychnine, and quinine given. Convalescence was rapid, and just ten days after the beginning of the attack the patient was up and about. The loss of weight in this short attack was remarkable. At the beginning of the attack the man weighed about 168 pounds; on March 7th he weighed 144½—a loss of 23½ pounds.

That the hot infusion of digitalis acts quickly upon the cardiac muscle that forces the blood through the affected area and thus to a marked degree overcomes the dyscrasia, is probably the *rationale* of the action of the drug. The use of a large dose of calomel, by reducing the consistency of the blood, takes the place of the old-time method of bleeding.

Petresco used the remedy still more heroically, making an infusion of ten grains of the powdered leaves instead of seven, to the ounce, and giving a tablespoonful every half hour instead of every hour. There can be no doubt that the results obtained in the cases reported were due to the solution being given hot; Dr. Hershey found that, in the use of drugs intended to act quickly upon the circulation, their diffusion is more rapid if given hot. This method of administration was suggested by Dr. D. D. Stewart, of Philadelphia, who first reported that the administration of sulphonal in hot water gave better and more rapid results than when the drug was given dry or in cold solution. In the twenty cases treated no ill results followed these large doses of digitalis. However, it would be advisable to watch the circulation; in case of a sudden lowering of the pulse-rate, the infusion should at once be stopped, for this is an indication that the desired effect of the remedy has been obtained; should slow pulse and low temperature persist, nothing will stimulate better than camphor, quinine, and strychnine, in quantities suitable to the case. Alcohol was not used until the temperature had subsided. In none of the cases was the so-called standard remedy, carbonate of ammonia, used. Further investigation will be made with this method of treatment, and when a sufficient number of cases have been treated an additional report will be made. At present this method of treatment has yielded Dr. Hershey far better results than any other.

NERVOUS APHONIA OF FOUR WEEKS' DURATION CURED BY SUGGESTION DURING HYPNOTIC SLEEP.

Emile Müller (*Gaz. méd. de Strasburg—Gaz. hebdom. des Sciences Médicales*, April 4th, 1891) relates the following case: Miss R., thirty years of age, was sent to him by her physician to be treated for aphonia, from which she had been suffering for four weeks without interruption. She had had three previous attacks, none of which had lasted for more than a week. Expectorants, inhalations, the continuous current, all had been employed without effect.

Laryngoscopic examination was negative. Dr. Müller tried faradization without result. He then concluded to employ hypnotism. He succeeded in hypnotising her without difficulty, promising her that he could probably restore her voice, if she allowed herself to go to sleep.

While she was in deep sleep, he suggested to her that her voice had returned. He then asked her her name, and she replied in a clear, strong voice. She also answered other questions put to her. Dr. Müller finally raised her from the hypnotic sleep, and she, wishing to apologize for having gone to sleep, perceived that she was speaking in her natural voice. She remained under observation for about a fortnight, and had no further aphonia during that time.—*Jour. Nerv. Ment. Dis.*

IODOFORM IN THE TREATMENT OF BURNS.

Rottenberg (*Therap. Monatshefta*, March, 1891) advocates the following method of treating burns. He is surgeon to large iron-works, and sees many cases of all degrees of severity. The blisters, if present, are pricked, and a silk thread soaked in corrosive sublimate solution run through them, and allowed to remain. The whole surface, no matter what the degree of burning, is coated thoroughly with a thick layer of vaseline containing 10 per cent. iodoform, and then covered with gutta-percha. The ointment is renewed daily. The pain is always very speedily lessened, and healing takes place in an eminently satisfactory manner, and quickly.

THE TREATMENT OF CHRONIC ECZEMA BY CREOLIN.

Dr. R. Glasgow Patteson,in the Dublin *Med. Jour.*, calls attention to the fact that the value of tarry preparations in many forms of skin disease—especially psoriasis and eczema—has long been recognized. "If I were required to name one remedy only for eczema," writes Mr. Jonathan Hutchinson, "I would chose tar; if allowed to chose two, tar and lead; and if three, tar, lead and mercury;" adding his "belief that tar is the specific for all forms of true eczematous inflammations of the skin." The form in which he uses it, is the alkaline solution of coal-tar known as "Liquor Carbonis Detergens"—a teaspoonful to a pint of warm water. The cost of this preparation debars its use in out-patient practice, and it was the cheapness of creolin and its excellent antiseptic properties that induced me a year ago to try its effects in the treatment of chronic eczema. A short experience satisfied Dr. Patteson that the most useful strength was that of one drachm of creolin to eight ounces of water—roughly speaking—a teaspoonful to half a pint of water. In this proportion, from which Dr. Patteson has never varied, it forms a bland and soothing emulsion, milky in appearance, and with a strong tarry odor, which has a marked effect in allaying irritability and itching, prevents the formation of scabs and crusts, and appears in a striking manner to moderate the pus producing activity of certain forms of eczema. The mode of applying it which Dr. Patteson has found most efficacious is the following, which though applicable in the majority of instances, must yet, like every other remedy, be modified to meet individual cases.

The parts affected, having been freed from crusts or other accumulations, by appropriate means, should be freely bathed in the freshly-prepared emulsion for from ten to fifteen minutes. If the disease is in the acute stage, or if there is much secretion, lint soaked in the liquid may be applied over all parts, and retained in place by suitable dressings. But if the eczema is of the squamous type, treatment in the intervals is best carried out by means of ointments—that which has yielded in his hands the best results being one composed of zinc oxide, white precipitate, and the glycerine of the subacetate of lead. Under this treatment recent cases recover with astonishing rapidity, and even cases of long standing soon show signs of improvement which, in the majority of instances, goes on to complete and permanent recovery. In only a few instances has it failed to do more than alleviate the condition.

He has since tried the remedy in cases of scaly eczema and psoriasis with marked relief to the irritability and itching, but it is still too soon to form any judgment as to its curative powers. But in the infective pustular eczema it is an agent that effectually controls the process, and well deserves a trial on a larger scale. If we accept Unna's definition of eczema as "chronic parasitic catarrh of the skin, with desquamation, itching, and the disposition to respond to irritation by exudation and well-marked inflammation," then we have a rational basis on which to ground our treatment by such an active germicide as creolin.

MAGNESIA AS AN INTENSIFIER AND PRESERVATIVE OF PEROXIDE OF HYDROGEN.

It was ascertained some time ago that when calcined magnesia is added to peroxide of hydrogen the bleaching action of the latter upon cotton is greatly intensified.

Prud'homme has recently studied this behavior, and has found that there is produced a peroxide of magnesium which is much more stable than the peroxide of hydrogen, even at a boiling temperature.

If a 6 volume peroxide of hydrogen is diluted with 10 parts of water, and then boiled for half an hour, its strength is reduced in the proportion of 100 to 10.

But if, under the same conditions, there are added 5 Gm. of calcined magnesia for every 100 parts of peroxide present, the half-hour's boiling will reduce the strength in H_2O only by one-tenth (from 100 to 90).

The formation of the peroxide of magne-

sium is rendered evident by proceeding as follows:

Place calcined magnesia [5 parts] in contact with a 3-volume peroxide of hydrogen [100 parts] at the ordinary temperature, and allow them to re-act for some time [the original says "from several hours to several days"]. Then filter, wash the contents of the filter, and dry at 100° to 105° C.

On assaying the product with permanganate of potassium, it will be found to have the composition $3Mg(OH_2).MgO(OH_2)$. This compound loses its active oxygen at a temperature of about 300° C.

The bleaching effect of a mixture of magnesia and peroxide of magnesium is due to both agents acting together. When fatty substances, such as oils, are bleached by these agents at a boiling temperature, there is an abundant escape of carbonic acid gas, due to the oxidation of glycerin.

Peroxide of hydrogen alone, when very slightly acidified, is capable of attacking neutral fats, producing therefrom fatty acids under evolution of carbonic acid gas.—After *Compt. Rend.*, 112, 1374.

[*Note by Ed. Am. Drugg.*—The facts above given may be utilized in surgical practice, in which peroxide of hydrogen is at present playing an important part as an antiseptic and disinfectant. The addition of magnesia will, in many cases, not be objectionable; and when it is desired to have the peroxide act rather slowly and gradually, no better method can be employed.]

SULPHONAL IN THE NIGHT SWEATS OF PHTHISIS.

Dr. Erede, of Genoa, calls attention (*Riforma Medica*, May 22nd, 1891), to what he calls "the marked antidiaphoretic action of sulphonal." He says that if given in the early hours of the evening it almost invariably succeeds in suppressing or greatly diminishing the night sweats of phthisis. A dose of half a gramme, given in the form of pastille or suspended in some gummy vehicle, generally suffices. The largest amount given was 1 gramme; this failed of its effect only in a very few cases in which the disease was extremely advanced. As no untoward effects were ever noticed, even in very debilitated patients, Erede thinks that with proper precautions the drug might be pushed up to 2 grammes, the usual hypnotic dose. In many cases he observed that in discontinuing the sulphonal after a time the sweating did not begin again at once, but only after some days, when it was immediately checked by repeating the medicine. This shows that the organism does not readily adapt itself to the prolonged use of the drug, as it does, for instance, to certain narcotics. Erede is inclined to think that the effect of sulphonal in checking diaphoresis is to be explained by its action on the nervous system.—*Brit. Med. Jour.*

FORMIC ACID IN SURGICAL TUBERCULOSIS.

In a paper read before the German Surgical Congress, Dr. Senger stated that his attention had been drawn to the fact that, in the treatment of surgical affections with iodoform-glycerine emulsions, the effects produced differed greatly, according to quality of glycerine employed. It was found that impure glycerine contained always a certain amount of formic acid, the proportion varying according to its degree of impurity. This led him to infer that the marked irritating properties of the formic acid might have some share in the curative effects of iodoform emulsions in tuberculous processes. The fact that iodoform, when introduced into the body, is converted by the process of oxidation into formic acid and hydriodic acid, explains its varying effects in different cases. When oxidation is sufficiently active to decompose it, iodoform exerts a curative action, which is not manifested when the process of oxidation is feeble. For these reasons the author added formic acid to iodoform emulsions and obtained favorable results, where the latter proved ineffective. In cases of tuberculous affections of the glands, and in a case of tuberculous arthritis of the ankle joint, formic acid was used alone, the formate of soda in solutions being injected. The results were excellent.—*Deut. Medicin. Wochenschr.*, No. 17, 1891.

BULL NETTLE—A NEW ALTERATIVE.

Dr. W. W. Pugh, M. D., states in the *Southern Practitioner* that he has been experimenting for some time, more than two years, with the root of a plant that grows in Texas, known by botanists as *jatrophia stimulosus*, and commonly called "bull nettle." He has found it to be specially adapted to the treatment of syphilis.

It is a stimulant of unusual power, and a most excellent alterative. He has treated quite a number of syphilitic patients, suffering from the worst forms of the disease, and has relieved them in three or four weeks, the

symptoms not having re-appeared in those treated over two years ago.

He makes a tincture of the root, and gives from twenty to thirty drops, three times a day.

MEDICINE.

RESUSCITATION BY OXYGEN.

Lieut. Col. Henry Elsdale's experience with oxygen as a resuscitating agent, related in the May number of the *Nineteenth Century*, is evidently considered by him (and by the editor of the magazine), as something wholly new. While far from being a novel application of oxygen, the case appears to be unique in the extraordinary pressure employed. A man who had been attempting to empty the coal-gas from a balloon was found lying insensible, "having been breathing an atmosphere of coal-gas for an unknown time." "No action of the heart could be felt," there was "no perceptible breathing," and to all appearances the man was dead. Pure oxygen being at hand, under a pressure of 1000 pounds to the square inch, a tube connected with the reservoir was inserted into the man's mouth, and the gas turned on "as delicately as possible." Immediately the body began to exhibit writhings and convulsions, and in about ten minutes the man arose, well.

That wonderful physician who, a century ago, honored the chair of chemistry at Oxford, Thomas Beddoes, the worthy friend and co-laborer of Joseph Priestley, Erasmus Darwin, James Watt and Humphrey Davy, demonstrated, among other things too little remembered by the profession, that kittens and rabbits that had inhaled oxygen for a certain time were more resistant to drowning, freezing or suffocating with irrespirable gases, than similar animals not saturated with oxygen.

Since the time of Beddoes, numerous observations proving the usefulness of oxygen in resuscitating the drowned or those poisoned with narcotic drugs or asphyxiating gases have accumulated. In J. Solis-Cohen's treatise *On Inhalation*, we read that previously to 1847 it had been proposed by Jackson and Richardson that "wherever ether was administered oxygen should be kept in readiness to be inhaled in case of the occurrence of formidable symptoms, and that Mr. Hooper, acting on the suggestion, has supplied his inhaler with the means of furnishing oxygen at pleasure." Ducroy "proposed to make every patient awakening from chloroform-narcosis inhale oxygen, in order to rid him of headache and other inconveniences following the administration of that anæsthetic," and a very remarkable instance of recovery from chloroform-narcosis by the use of oxygen, which occurred at the New York Medical College, was published by Abrahams in 1853.

Notwithstanding all this, and despite the fact that modern commercial enterprise has made it perfectly feasible always and everywhere to have the agent at command, there are many Hospitals in which oxygen is not ready for instant use in emergencies, and it has not yet been recognized as an indispensable part of the outfit of life-saving stations. We believe that, not only in every clinic or private house where ether or chloroform is to be given should oxygen under pressure, be instantly available, but that in hotels where persons are liable to be poisoned with coal-gas, and even in police-stations where persons poisoned by opium are likely to be taken, it should always be possible te find a reservoir of the gas. At seaside resorts, too, it should be part of the rescuing paraphernalia kept at the beach. A single life saved, and there would be many, would more than compensate for the cost. The pressure appears to have been a factor in Elsdale's case, and in any case the administration of oxygen should be accompanied with slow and regular movements of artificial respiration. B. W. Richardson has shown that in artificial respiration the emptying of the lungs is ordinarily as important as the filling of them; and in his simple device of a double hand-bellows for that purpose, artificial expiration by suction plays an equal part with artificial inspiration by pressure.—*Med. News.*

A CASE OF FOUR ATTACKS OF APPENDICITIS IN ONE YEAR—EXCISION OF THE APPENDIX—ABSENCE OF ANY FURTHER SYMPTOMS A YEAR AFTERWARDS.

Dr. A. Ernest Maylard, says the *Lancet*, in view of the recent discussions which have taken place regarding the treatment of this particular class of diseases, the record of the present case may not be without interest. The patient, Mr. G. G——, a strong and healthy young fellow of twenty-one, was under the care of my friend, Dr. Alex Napier, of Crosshill, to whom it had suggested itself that the case was one particularly well suited for the operation of excision of the appendix. He asked me to see the patient with him,

and I concurred both in the diagnosis and in the treatment proposed. The clinical notes of the case, as furnished by Dr. Napier, are briefly as follows:—June 4th, 1889: First attack slight, lasted only a few days, and subdued by rest and a few doses of an opiate. Constipation, pain and tenderness in right iliac fossa, some distension; temperature not much elevated. July 14th: Second attack, after lawn tennis, very severe; temperature ran up to and over 103° F.; pulse rapid; vomiting for several days; constipation; coated tongue; marked distension, universal tenderness, and tympanitic percussion note. Most acute pain in right iliac fossa. Patient very seriously ill for a few days, but gradually recovered, as before, by rest, opiates, poultices, and limited diet. Oct. 7th: Third attack, after some indiscretion in the way of exercise. Again a severe attack, much like the last; overcome in the same way. April 2d, 1890: Fourth attack, less severe than the last two, but marked by exactly the same general symptoms. In all four attacks, as the symptoms passed off, the pulse fell markedly—to 44 on one occasion. On April 8th I saw the patient with Dr. Napier, he was then recovering from his attack. We had him removed to the Training Home for Nurses, where, with the assistance of Dr. Rutherfurd, I excised the appendix on the 16th. Operation: An incision was made in the nipple line, over the cæcum and ascending colon. The presenting bowel was traced downwards until the junction with the ileum was reached. The finger, then inserted beneath the cæcum, felt the appendix distended and fixed. It formed a tense elastic tumor about the size of a little finger. For about half an inch at its cæcal extremity it was normal in calibre, but from that point onwards the appendix was dilated. Around this narrow normal part of the appendix a double ligature was passed, and the neck divided between. In the first attempt to detach the appendix from its connexion it burst, and some mucus-like material escaped. The adhesions were in some places intimate, but at others recent and very vascular. After complete severance the oozing was so free that pressure had to be applied for some short time. The wound was dressed once after the operation, and healed by primary union. The patient's temperature was normal throughout his recovery, and no untoward symptoms of any kind showed themselves. He was kept rigidly on his back for a month to allow of firm union in the parietal wound. State of the appendix: On slitting up the viscus it was found to be empty, and on everting it the lining of its walls had the appearance of pulpy granulation tissue. No canal could be made out at its cæcal extremity.

It is now a year since the operation. The patient has enjoyed perfect health, and is quite free from any feeling of weakness in the region of the cicatrix. The diagnosis of catarrhal appendicitis proved correct, and so, also, would seem the treatment. Whether this patient would, by conservative measures, have reached a period when no further repetition of his troubles would have taken place, or whether the time might have come for opening an abscess in the region of the appendix, or even graver measures, it is impossible to say. The operation can hardly be said to have carried any risks with it, and its result was and has been to relieve him completely of his trouble.

PYOGENIC COCCI IN THE SWEAT IN PYÆMIA.

Dr. Anton Freiherr von Eiselsberg, Assistant in Professor Billroth's clinic in Vienna, reports (*Berl. klin. Wochenschrift*, June 8th, 1891) the dicovery of pyogenic cocci in the sweat of a man aged 31, the subject of pyæmia, following osteomyelitis of the femur. The patient was somewhat relieved by operative procedures, and these were followed by excessive sweating, but he ultimately died with multiple pyæmic abscesses. Both in the pus from the original seat of disease and in that from the metastatic abscesses and also in the patient's blood, a large quantity of staphylococcus pyogenes aureus was discovered. In order to examine the sweat, the patient's forehead was very carefully cleansed and disinfected, and specimens of sweat were taken from various parts of the skin so cleansed directly they appeared. Inoculations into cultivation tubes were made, and it was found that in agar and gelatine no result took place, but in two agar tubes a growth ensued, which on further inoculation was proved to consist of staphylococcus aureus. Cultivation on plates and frequent repetition of the experiments were followed by similar results. The presence of the identical micro-organism in the pus and in the blood and in the sweat, after the most elaborate precautions had been taken to prevent contamination of the skin, would seem to warrant the conclusion that the coccus is actually present in the sweat and is excreted from the body with it. The improvement so commonly noted after excessive sweating may perhaps be directly

dependent upon this excretion, and at any rate should direct attention to the treatment of the skin in such cases, so as to favor as far as possible the excretion of sweat when the disease is presumably due to the presence and activity of the staphylococcus aureus.—*Brit. Med. Jour.*

PAINFUL SENSATIONS IN HEART-DISEASE.

While the subjective manifestations, dyspnœic troubles of all sorts, from which those afflicted with heart-disease suffer, have received full consideration by physicians at all times, the subjective sensations of pain which accompany valvular disease have received but slight notice.

Of 483 cases of heart-disease treated during the last seven years in Nothnagel's clinic, 127 (i. e., 26.2 per cent.) manifested painful sensations. Nothnagel excluded from this list all cases of paroxysmally recurring attacks of stenocardia; moreover, under painful sensations were included only those pricking, tearing, burning and boring pains in the cardiac region, which were more or less constant. At times the patients described a sensation as though the heart were being torn out; or there suddenly came on an excruciating pain, during the continuance of which the heart pulsated with great force. In either case, the pain was located in the left side or in the back. At times there occurred a feeling as if a foreign body lay in the left thoracic cavity, as if there were a sore in that region, or as if the heart trembled with pain. Nothnagel makes a further observation, however, which has not before been recorded, namely, that in these cases the objective sensibility is increased, and that not only in cases of paroxysmal stenocardia, but also in other painful conditions. Gently pinching a fold of the skin, lightly pricking with a pin, or pressure over an intercostal space in the line of an intercostal nerve, in the precordial region, elicits great tenderness, sometimes even severe pain.

In uncomplicated disease of the heart-muscle (myocarditis, fatty degeneration, arterio-sclerosis, and idiopathic hypertrophy), the subjective sensations are so pronounced sometimes as to almost establish the diagnosis. The clinical picture in these cases is similar to that of valvular disease.

The author does not give us a clear and uncontrovertible explanation of these painful phenomena, but leaves us to consider the algesia-cutaneous hyper and neuralgia eccentric irradiating manifestations.—*Zeitschrift für klinische Medizin*, Bd. 19, Heft 3.

SURGERY.

THE TREATMENT OF CHRONIC ULCERS BY MASSAGE.

Dr. A. Ernest Maylard, in the Glasgow *Med. Jour.*, publishes a short contribution to advocate a methed of treatment for a very common and always a very troublesome class of cases—that of chronic ulcers of the legs. The subject is based on a few cases which have been successfully treated in the wards of the Victoria Infirmary, the histories of which are related. The principles on which the treatment is founded, and its mode of application, are thus briefly described:

As a rule, these chronic ulcers arise from some slight accident to an area of the limb already in a condition to break down at the smallest incentive. The parts are in a condition of passive stagnation and engorgement, the result either, as most frequent, of varicose veins, or of some other obstructive influence. The result of this passive engorgement is a hyperplasia of the connective-tissue element, leading to much thickening of the parts around. This is shown by the denseness or hardness of the soft tissues, and not infrequently by some enlargement of the bone due to sub-periosteal deposits. Still further, the blood stagnation renders the new formed tissue, as also that of the old, of very low vital powers. An ulcer, then, once formed is only too likely to extend. Another important factor is the mechanical obstruction which this venous engorgement and tough new formed tissue causes in preventing the entrance of fresh arterial blood *to* the part, and the exit of used up material by the lymph channels *from* the part.

What, then, is needed in the treatment of these cases is 1. the relief of the engorged condition of the veins by the removal of the cause which engorges them; 2. the relief of the plugged condition of the lymph vessels; 3. the re-admission of arterial blood to the part; and 4. the removal of deleterious exciting influences from the surface of the ulcer itself.

The recumbent position, which is usually enforced on the patient, or, failing that, the application of an elastic bandage when the patient is erect, usually aids much in removing the cause of venous engorgement of the part. But helpful as are these passive measures they far from supply all the needs required. More active treatment is requisite to effect an entrance of arterial blood to the part, and an exit of effete material from it. This can only be done by "massaging" the

limb—to wit, by rubbing, pinching, and kneading the part. The forcibly stroking the limb in an upward direction tends to drive on the venous blood, and let in the arterial; to force out the contents of the lymphatics, and to allow the entrance of other effete products.

In order to massage the floor of the ulcer, he has adopted the following plan: A piece of jaconet, sufficient in size to be held tightly around the limb, is dipped in some 1 in 2,000 bichloride of mercury solution, and then placed with its non-glazed side over the ulcer and surrounding parts. The smooth surface is dried, and a small quantity of vaseline smeared upon it. The palmar surface of the hand is by this means permitted to pass easily over the ulcer, and thus admit of its being massaged like the surrounding parts.

While the immediate result of this treatment has in every way proved good, he believes its more remote effects will be found to be equally valuable, for the cicatrix of an ulcer that has been massaged is seen to be well vascularized, and therefore much less likely to break down than when the ulcer has sluggishly skinned over. Further, it is a treatment which can and should be continued by the patient, so as to maintain the parts in a healthy condition.

Where these ulcers are associated with varicose veins, such veins ought to be exercised; and thus a potent factor in the cause of the passive engorgement of the part removed.

The only other operative procedure (with the exception of skin grafting) which is sometimes of service is to dissect up a flap from the immediate neighborhood of the ulcer, twist it round over and on to the freshened surface and edges of the sore. As with skin grafting, this should be done when the ulcer is healing. For by this time the massaging of the part has revivified the floor of the ulcer, and rendered healthier and more active the skin around.

With regard to the fourth requirement, the removal of all deleterious exciting influences from the surface of the ulcer, this simply means the cleansing of the ulcer from all septic matter.

The following are his conclusions:

1. Improvement shows itself at once, and is most marked during the first week or two. The heaped up skin edges begin to disappear, and a sloping healing blue line is observed. The floor of the ulcer soon shows healthy granulations. The surrounding skin becomes early whitened or mottled, indicating the complete emptying of the congested venules.

2. Later, the skin around becomes more pliable, and can be pinched up and freely moved on the underlying tissues.

3. The cicatrix formed is well organized, and thus less liable to break down.

4. The treatment can be carried out by a nurse or by the patient's friends, and the massaging should be continued after healing has taken place, in order to maintain the skin and soft parts in a healthy condition.

OPERATIVE TREATMENT OF HYPERTROPHIED PROSTATE.

Bottini, of Pawia, related at the Berlin meeting of the International Medical Congress (*Wiener Medicinische Wochenschrift*, May 23rd, 1891) his methods and results in the treatment of 57 cases of hypertrophy of the prostate gland, by Galvano-cautery. His apparatus consists first, of a Galvano-cautery of about the calibre and curve of a Mercier's catheter, which contains four tubes; two for the transmission of electrical currents, and two for a stream of cold water with which to cool the apparatus, and; second, of a thermo-Galvanic knife for simply incising the gland. The first apparatus, which is for simple destruction of tissue, is suited for cases of partial or slight enlargement; the second for cases in which the hypertrophy is complete and uniform, or when, if partial, it is very great. The cautery knife resembles a Mercier's inciser with the difference that its edge is formed of a dull platinum rim, and also that it has two tubes for cold water.

There are three stages in the operation: 1st. Introduction, which is in accordance with rules for introduction of catheter: 2nd. Cutting or destruction of tissue, with heat *not greater than a red glow*, which is manifested by the hissing sound of burning tissue. 3rd. Removal of apparatus, also in accordance with rules for removal of catheter.

Of the 57 cases treated, 32 were completely cured, 11 improved, 13 without improvement, while 2 died. The fatal results were obtained with the old apparatus, before the introduction of the cold water tubes.—*Amer. Lancet.*

CEREBRAL SURGERY.

Dr. Frank P. Norbury, in the *Medical News*, in summing up what can be done in cerebral surgery quotes the conclusions of a report read before the International Medical Congress, 1890, by Victor Horsley, of Lon-

don, one of the foremost surgeons and experimenters in this line of work:

1. Operation should be done in every case of brain injury. It is the only means of restoring the patient to a normal condition and may prevent epilepsy and dementia.

2. In every case of intra-cerebral hæmorrhage, seen within four hours of the apoplectic attack, the common carotid artery should be tied.

3. Trephining should be done in cases of headache refractory to all other measures.

4. Cerebral gummata should be removed; iodide of potassium palliates but does not cure them.

5. Tubercles should be removed when practicable.

6. Operation should be performed when other tumors are present, even when multiple, if relief is not obtained from other measures in six weeks.

7. Operation should be performed for athetosis and other spasmodic affections.

8. Operation should be performed for Jacksonian epilepsy, after first testing the cortex with the faradic current to locate the point of origin of the convulsion.

9. Operation should be performed for fracture of the vertebral column when compression exists.

10. Operation should be done for paraplegia from spinal caries.

Horsley represents aggressive cerebral surgery. Perhaps he is an extremist, or possibly we have not yet awakened to the possibilities of operative surgery in diseases of the brain and spinal cord.

THE SURGERY OF THE CAUDA EQUINA.

Dr. Leopold Laquer, in the *Neurologisches Centralblatt*, describes a case of compression of the cauda equina that came under his notice in September, 1888. The patient at that time complained much of a pain in the sacrum, and was unable either to sit or to lie with any comfort. In December, 1889, there was an exaggeration of the previous symptoms, with marked alteration in motion and sensation, as well as some atrophy of the lower extremities. The electrical re-actions of both muscles and nerves were normal, and the reflexes were normal. Despite all treatment, the symptoms of pain and stiffness of the lower part of the back continued to increase in severity until September, 1890, when the patient was able to move only in the most careful way, and was obliged to hold his back in an attitude of extreme kyphosis. On the right side the patellar reflex was abolished, and on the left side it was very weak. Sensation was absent in the scrotum and perinæum, and also in the lower extremities. The sexual power was weak. There was some atrophy of the quadriceps of each side, but there were no trophic changes, and there was no ataxia. The patient's condition was one that obviously called for interference of some sort, as death from exhaustion was imminent. The symptoms, taken collectively, led the author to the diagnosis of compression of the cauda equina, from some unknown cause, followed by generative neuritis. Dr. Louis Rehen cut down upon the sacrum, and, laying open the entire canal, disclosed a small extradural tumor in the middle of its lumen. After its removal, further examination of the growth showed it to be a lymphangeioma cavernosum. Recovery was prompt. By the end of the second week after the operation the patient was free from pain, and sleep was natural. Four months later there was only a small opening left in the sacrum, the patient was able to go about holding the body in a normal attitude, the functions were nearly restored to the normal state, and the reflexes, though still diminished, were equal on both sides.—*N. Y. Med. Jour.*

STATISTICS OF STOMACH AND BOWEL RESECTIONS.

At the International Medical Congress last year at Berlin, Billroth reported the results of stomach and bowel resection. He gave the statistics of 124 resections which had been made in his clinic from 1880 to 1890; of which 83 were by himself, 3 by Wolfler, 8 by Hacker, and 15 by Saltzer and Eiselberg. The cases were all chronic processes with pyloric stenosis, malignant forms of swelling. There were 41 cases of pyloric resection (7 male and 34 females, with ages of from 26 to 58 years). The operations lasted from 1¼ to 3½ hours, with removal of 4 to 21 centimetres of the intestine. The cause of operation was: In 28 cases carcinoma; in one case sarcoma; in 12 cases callous cicatrices. Results; 19 cases recovered, 22 died. Of 27 typical pyloric resections, 12 were favorable and 15 fatal. Of the 13 cases of carcinoma that had endured the ordeal of the operation, 5 died after 10 months, and one after 5¼ years from recurrence. There were yet living three women of whom two had been operated upon 2½ and 4½ months.

There were six operations on account of scar stenosis, of whom three recovered. One patient died after three months from peritonitis, caused by an abscess in the cicatrix.

There were 28 gastro-enterostomies on account of carcioma with 14 recoveries. These all died in from one to eight months.

Of 11 resections of the small intestines (7 male and 4 females) all were favorable. (Eight times on account of preternatural anus, once traumatic opening of intestine, and once carcinoma).

Of 24 resections of the cœcum, there were eleven on account of carcinoma (with five recoveries); thirteen on account of fistula after perityphlitis (seven recoveries, five deaths, and one persistent fistula). Of total cases of cœcum resections, eleven deaths, thirteen recoveries.

Of 8 colon resections, four deaths and four recoveries.

Of 7 resections of rectum all recovered, five times with formation of fistula.—*Wiener Med. Wochenschrift.*

GYNÆCOLOGY.

THIOL IN DISEASES OF WOMEN.

Gottschalk (*Centralblatt f. Gynakologie*, March 21st, 1891) has used thiol in inflammations of the uterus and its appendages for nine months. He treats para and perimetric exudates with vaginal tampons impregnated with a ten or twenty per cent. glycerine solution of the drug. At the same time he has the abdomen rubbed once daily with a salve containing the same remedy. After the tampon has been placed, the patient, as a rule, feels a "drawing up" of the belly, and there is a free flow of vaginal secretion. The tampon is removed in twenty-four hours, and the flow ceases. The local effect of the drug on the skin of the abdominal wall is much the same as that of tincture of iodine. After six or eight days' application, it is well to intermit this part of the treatment until the skin has regained its normal condition. Under this treatment, which will eventually be supplemented by the internal use of the drug, large pelvic exudates have disappeared in a few weeks. Up to the present time, Gottschalk has not failed to cure any case of this kind by this treatment, which has passed through his hands. Baths and massage are very useful adjuncts to the treatment. Inflammatory erosions about the vagina are treated with equal success by dusting them with a dry thiol powder. Acute and chronic endometritis also yield readily to the remedy applied in solution on an applicator. The application is painless and without danger. The uterine colic which follows the use of iodine is not met with. No serious irritation has been observed to follow either the vaginal or intra-uterine applications. At times a slight blood discharge is seen to follow immediately after the treatment, due to the local irritating action of the drug upon the uterine mucous membrane. The mucous membrane is exfoliated after many applications.—*University Medical Magazine.*

MOLAR PREGNANCY AND ALBUMINURIA.

Dr. Schuhl (*Archiv. de Tocol. et de Gynéc.*, June 1891) discusses the question as to whether albuminuria in pregnancy is sometimes the cause of myxomatous degeneration of the chorionic villi. After a search through many statistical records, he believes that it may be laid down as a fact that albuminuria in molar pregnancy is usually precocious, as is very clearly indicated in 7 out of 132 cases of this form of abnormal gestation. In 1 of the 7 cases of albuminuria, the albumen appeared during the first month, in 1 during the third, in 3 during the fourth, in 1 during the fifth, and in 1 where the uterine fundus reached to about the level of the umbilicus. On the other hand, many authorities have shown that in otherwise normal gestation albuminuria most frequently occurs during the last three months; being very rare during the earlier periods. Dumas, Dr. Schuhl observes, quotes cases where albuminuria has appeared at the sixth week, and the third, fourth and fifth month, but maintains that these are quite exceptional. The rule, according to Dumas, is that in primiparæ albuminuria commences between the seventh and eighth months, whilst in multiparæ it does not begin until the ninth. From the above evidence, Dr. Schuhl concludes that there is some obscure relation of cause and effect between albuminuria and hydatid degeneration of the chorion.—*Brit. Med. Jour.*

HÆMATOSALPINX AND TUBAL GESTATION.

Dr. J. Veit (*Centralbl. f. Gynäk.*, May 30th, 1891) discusses the now very important question as to the distinction between ruptured early extra-uterine gestation and hæmatosalpinx from other causes. Under the latter category come cases of hæmorrhage into a tube already distended,

and cases where the distension follows the bleeding. Dr. Veit relates a case of hæmorrhage into a tube following torsion of a hydrosalpinx. New growths and even injuries may cause hæmorrhage into the tube, but such cases are very rare. The "tubal mole" is a difficult subject. The presence or absence of chorionic villi amongst the coagula in these cases is not the only distinction between ruptured tubal gestation and hæmatosalpinx. The abdominal end of the tube is always open in cases of early tubal pregnancy, excepting where migration of the ovum from the opposite ovary through the opposite tube and across the uterus has occurred. A distinctly closed ostium, sealed up by the usual inflammatory processes, in a tube full of blood or clot otherwise indicates hæmatosalpinx not due to abnormal pregnancy. This closure of the tube is also present in the hæmatosalpinx of atresia of the lower genital tract.—*Brit. Med. Jour.*

TORSION OF PEDICLE OF AN UNDIAGNOSED OVARIAN CYST IN THIRD MONTH OF PREGNANCY.

Dr. Baudron (*Bull. de la Soc. Anat. de Paris*, April-March, 1891, pt. 10) describes a case where a patient, aged 28, was seized with violent pains in the left iliac fossa in the third month of her third pregnancy. She had previously noted occasional pain in the same part. The whole abdomen was now swollen and tender. For a week the violent pains continued, becoming more severe at regular intervals, so that abortion was suspected. There was no rigors, no nausea, no vomiting. Diagnosis was very uncertain, parametritis, retro-uterine hæmatocele, and hydramnios being suggested by different observers. The uterus was of the size normally observed at the end of the seventh month, though the menstrual history indicated that pregnancy had not advanced beyond the third. On the tenth day the patient vomited, the abdomen felt very tender, and intermittent pains had been continuing for a week. M. Pozzi operated on the next day; digital exploration had proved that there was no evidence of threatened abortion. A dark liver-like body, fluctuating and adherent to the intestine, uterus, and and great omentum, lay above the uterus, which was, as expected, gravid, and at the third month of pregnancy. The body was punctured, and six quarts of dark fluid, fœtid blood escaped. The body was the left ovary, cystic, and with a large pedicle twisted three times from right to left This pedicle had been detected by palpation a few days previously, and taken for ectopic pregnancy in a rudimentary uterine cornu. The pedicle was ligatured and the tumor removed, the peritoneum flushed, and the wound closed, excepting at the inferior angle, where a strip of iodoform gauze was passed into Douglas's pouch. Abortion took place next day, and a dead macerated fœtus was expelled, without flooding. Three hours later, as the patient was asking for some drink, she was seized with a fatal attack of syncope.—*Brit. Med. Jour.*

OBSTETRICS.

THE CAUSES AND TREATMENT OF PUERPERAL OSTEOMALACIA.

Dr. H. Fehling, in the *Archiv. für Gynäkologie* says that the results in cases of puerperal osteomalacia have heretofore been exceedingly poor. According to Litzmann's and Hennig's statistics, eighty per cent. of the cases died. Cesarean section (Porro's method) gave better results than any other plan of treatment. According to Baumann, out of forty-four cases of osteomalacia who were delivered by this method, twenty-six recovered. Of these twenty-six, five died from other causes, such as heart disease, nephritis, and tuberculosis, leaving twenty-one cases who made excellent recoveries. These results led Fehling to believe that the removal of impregnation and nursing effected a cure, and, arguing from this, he decided to observe what effect would result in these cases by removing the ovaries. He operated upon fourteen cases in all, one of which died; the others made an excellent recovery. From the large number of cases occurring in this district we would consider the disease as epidemic in Basel. In examining the histories of those cases that were operated upon, we find that their ages varied between 28 and 51; that they had each borne from 4 to 10 children, the average being 5.4. The social condition does not seem to have any effect upon the acquiring of the disease, nor does long nursing.

According to these results, there can be no doubt that by performing oöphorectomy, and thus putting an end to ovulation and menstruation, a cure for osteomalacia can be accomplished. Other observers have obtained similar results, so that the total number of cases has now reached twenty.

As to the causation of the disease we are still very much in the dark. Some believed the disease to be due to a bacterium, and its epidemic character would make this seem plausible. But if such were the case, how could we explain the method of cure by means of removing the ovaries or by Porro's operation? Diminished alkalinity of the blood has also been given as a cause. Experiments were made upon the patients to test this. The results would not lead one to believe that this could be the cause. The diminished alkalinity merely shows the severity of the disease.

Certain positive factors in the disease are: First, that nearly all the cases were markedly worse when menstruating. This would lead us to suppose that the menstrual congestion stood in a certain relation to the disease. This is also confirmed by the fact that the disease occurs more frequently during pregnancy and in the puerperal state. Second, the marked diminution of the pains shortly after the operation. Two or three days after the operation the pains in the sternum and ribs cease, then later on those in the pelvis and lower limbs also disappear.

The result of these observations leads us to believe that the disease is due to a morbidly increased activity of the ovaries. The changes in the bones are to be looked upon as reflex. According to this, we must look upon osteomalacia as a trophoneurosis of the bones, especially of the pelvic bones, this trophoneurosis depending upon the generative process, especially in the ovaries.—*Amer. Jour. Obstet.*

THE DIAGNOSIS OF NON-PUERPERAL OVARIAN ABSCESSES.

Acute non-puerperal inflammations of the ovaries are extremely rare. Pathologico-anatomically considered, there are two forms of inflammation of the ovaries—the parenchymatous and the interstitial. The first form occurs in acute exanthemata, typhoid fever, recurrent fever, cholera, septic processes, phosphorous and arsenical poisoning, and has merely an anatomical interest; for, clinically it produces no characteristic symptoms, and is only discovered at the post-mortem table. The second form occurs very rarely; except after the puerperal state and in the beginning of the disease, the diagnosis is extremely difficult, for the symptoms could be considered as due to a perioöphoritis or a localized peritonitis. According to Olshausen, a positive diagnosis of acute oöphoritis can only be made when we can feel the enlarged ovary, and can be sure that the pain arises from it and that none of the surrounding organs are affected. Even then we cannot be sure, but, in order to be so, have to perform a laparotomy, or we make our diagnosis at the autopsy. The total number of cases that have been published being very few, the following case is cited in order to show the difficulties in making a diagnosis:

A woman, blonde, single, 23 years old, gave the following history: Menstruated regularly from her sixteenth year on. In June, 1888, had an abortion in the tenth week; does not know the cause. After that she had a discharge which lasted six weeks. Following this menstruation began again and continued to be regular. From September to November, 1889, she had a severe attack of acute articular rheumatism. Had a leucorrhœal discharge during this entire attack. In the beginning of February, 1890, she was suddenly taken with chills and fever; began to menstruate and had slight drawing pains in the left side of her abdomen. A physician who saw the patient diagnosed peritonitis. The pains became more severe and finally became cramp-like in character, extending from the left side toward the right and into the back. Complained of slight burning when urinating. Last menstruation March 22d, lasting four days. Six days later a severe hæmorrhage, lasting three days. Complains continually of pressure upon the bladder, and is compelled to urinate very frequently. Has very little appetite. Temperature below normal, rising in the evening to 38.7 C. Abdomen tense and retracted. Pressure upon the abdomen is not painful. By external palpation nothing can be made out. Uterus not enlarged; sharp anteflexion; freely movable. The right ovary, the size of an almond, can be easily felt. On the left side a tumor is felt, as large as an apple, and is attached to the fundus uteri, but can be separated from it. The consistence of the tumor is firm, but in several places soft spots can be felt. The tumor cannot be moved. The left ovary cannot be felt. A diagnosis of purulent tumor of the uterine adnexa was made. Whether it was of the tube or ovary remained a doubtful question. As the tumor had weakened the patient, and made her unfit for her work, and caused considerable pain, it was decided to perform laparotomy. This was done on April 14th. The abdominal incision began at the umbilicus and extended

to three centimetres above the symphysis. Intestines came into view and were pushed to one side. Then on the left side the tumor became visible. It was surrounded by the peritoneum, and was adherent to a loop of small intestine. It was loosened with considerable difficulty. In endeavoring to draw it out of the pelvis it burst, and the contents, which were greenish-white pus, about three tablespoonfuls in all, were evacuated into the abdominal cavity. It was carefully wiped away with sponges. That portion which was adherent to the intestine could not be separated without tearing the latter; it was therefore left behind and the rest removed. The tube was ligated at the uterine end, and was also removed. Abdomen was carefully cleansed and the wound closed. No reaction occurred until the tenth day, when a small superficial abscess of abdominal walls was developed. This lasted eight days. On the 10th of May the patient was discharged cured. Microscopically, portions of ovarian stroma were found in the abscess membrane. From the history the probability is that the abscess was due to a gonorrhœal infection. It would have been impossible in this case to tell whether it was a pyosalpinx or an ovarian abscess. It could also have been mistaken for a hydrosalpinx, hæmatosalpinx, tubo-ovarian cyst, and tuberculosis of the tubes. A hydrosalpinx has rather a characteristic form. Beginning at the uterine end, it swells as it goes out toward the side. The affection is usually bilateral. The amount of pain is very slight and there are very few symptoms. It is utterly impossible to diagnose a tubo-ovarian cyst if it undergoes suppuration from the disease in question. The same is true in cases of tuberculosis, when cheesy masses form. It may also be difficult to diagnose the disease from a parametritis or an intra-peritoneal pelvic exudation. The cause of the interstitial form of the disease is usually menstrual suppression or else gonorrhœal infection. The former cause is a rare one. The symptoms in the case just described pointed to gonorrhœa as the cause. The yellowish discharge, the burning and frequent desire to urinate, all point to this as the source.—Dr. Joseph Rheinstein, in *Archiv. für Gynäkologie.—Amer. Jour. Obstet.*

PÆDIATRICS.

LAPAROTOMY FOR THE TREATMENT OF TUBERCULAR PERITONITIS IN CHILDEN.

Surgical treatment of tubercular affections of the peritonæum presents, besides its practical importance, a great scientific interest on account of its mysterious and unaccountable action. There are three principal forms of tubercular peritonitis, classed as follows: 1. tubercular masses, without ascites, disseminated in the peritoneal cavity; 2. cystic effusion; 3. disseminated tubercles with general ascites. The course of the disease is acute, subacute or chronic. Excepting the form combined with ascites, which is often mistaken for a simple ascites, and which yields to tonic treatment and repeated punctures, the different forms of peritoneal tuberculosis present a grave prognosis, and Henoch even considers them incurable. The first cases of surgical treatment of the disease were due to errors of diagnosis. The results were so favorable that the cases have greatly multiplied. At the recent Congress at Berlin, König presented statistics of 131 cases of surgical intervention in tubercular peritonitis. The mortality was 3 per cent.; 84 cures, 23 improved. The operation consists in a large opening of the abdomen with evacuation of the liquid; the other procedures are accessory and only have a very little influence as to the result. The cure is not simply temporary; its continuation has been confirmed after 2, 12 and 25 years. In certain cases, the autopsy showed a complete disappearance of the tubercles, that is to say, *restitudio ad intergrum.* Before examining the results given by surgical intervention in tubercular pertonitis in children, the writer gives a case of his own, and a short résumé is here given. Anna K., aged 3 years and 9 months, entered the hospital Sept. 8, 1890; a brother died of tuberculosis. The patient had whooping-cough at 2 years, which lasted five months. Since July, 1890, diarrhœa, and abdomen swollen; dull; fluctuating. Temperature running from 38° to 39° C. Sept. 11, chloroform; an incision 5 centimetres long between the pubis and umbilicus; evacuation of the liquid; drainage; the wound closed by deep sutures; iodoform dressing; a piece of peritonæum examined by the microscope showed tubercles composed of giant cells, etc. Sept. 23, the sutures were removed, and the wound united by first intention; the temperature slightly lower. Sept. 27, icterus, fever, cough, œdema of the malleoli. Sept. 30, all the symptoms were better. Oct. 4, the fever persists, abdomen enlarged and dull in the lower region. Oct. 10, the abdomen was opened again on the line of cicatrization; both folds of the peritonæum were united by a gelatiniform substance covered with tubercles having a car-

tilaginous consistence. Abdomen was washed out with boracic acid solution; a thin layer of iodoform dressing; drainage. Oct. 22, the fever had fallen, abdomen diminished in size, patient gained weight, cure. The icterus noted in this case was only transient epidemic. Writers have wished to explain the action of laparotomy by the influence of light on the bacillus of Koch. But in cutaneous affections, this action of light, although much more prolonged, does little to prevent the evolution of the affection. König explains the action by suppression of the peritoneal cavity. The above case corroborates this hypothesis. In spite of the frequency of tubercular peritonitis in childhood, laparotomy has only been performed twenty times, including my case; twice in children, aged 3, once at 8 years, twice at 5 years, twice at 10 years, three times at 11 years, twice at 12, four times at 13 years, twice at 14 and once at 15; of these cases 6 were boys and 13 were girls. In every one of the twenty cases the result was favorable, and the patient was cured. In two cases there was a relapse; a second operation was performed at an interval of one month and was followed by success. Laparotomy is one of the best methods for the treatment of tubercular peritonitis in children.—*Alexandroff, in Wracht—Amn. Gyn. Pæd.*

HYGIENE.

PASSAGE OF THE BACILLUS OF TUBERCULOSIS FROM THE MOTHER TO THE FŒTUS.

Birch-Hirschfeld and Schmorl (*Beitrage zur Path. anat. und zur allg. Path.*, 1891, p. 429) have put on record a case which they claim is the first in which it has been definitively proved that in the human subject tubercle bacilli pass from the mother to the fœtus. The patient was a young woman who, shortly after the commencement of her first pregnancy, began to show signs of phthisis; these gradually became more marked, and she succumbed at the seventh month of her pregnancy. Immediately after the death of the mother the fœtus was removed by Cæsarean section. The necropsy on the mother showed abundant evidence of phthisis; not only in the lungs, but in other organs, tuberculosis was detected. Although the fœtus had been alive shortly before the death of the mother, it was dead when it was removed. The chest was at once opened, but there was nothing noteworthy about the lungs. The fœtus was then taken to the laboratory, the surface of the abdomen was washed with perchloride of mercury, and the cavity was opened with sterilized knives. No tubercles could be seen on any of the organs. Minute pieces of the liver, the spleen and the kidney were placed in the abdominal cavity of two guinea-pigs and a rabbit, with all antiseptic precautions. One of the guinea-pigs died in fourteen days, and tubercles were found in different parts of the abdominal cavity. The second one was killed about six weeks after inoculation, as it was clearly ill, and many tubercles were found in the peritoneal cavity. The rabbit lived three months; on its death many tubercles were found in the liver and the lung. Tubercle bacilli were found in the umbilical cord and the blood of the umbilical vein.—*Brit. Med. Jour.*

WARUM ICH NICHT MEHR VEGETARISCH LEBE.

Such is the title of an article containing the renunciation of Dr. Alanus, sent to the *Renish Courier*. He says:

"Having lived for a long time as a vegetarian without feeling any better or worse than formerly with mixed food, I made one day the disagreeable discovery that my arteries began to show signs of atheromatous degeneration. Particularly in the temporal and radial arteries this morbid process was unmistakable. Being still under forty, I could not interpret this symptom as a manifestation of old age, and being, furthermore, not addicted to drink, I was utterly unable to explain the matter. I turned it over and over in my mind without finding a solution of the enigma. I, however, found the explanation quite accidentally in a work of that excellent physician, Dr. E. Monin, of Paris. The following is the verbal translation of the passage in question: In order to continue the criticism of vegetarianism we must not ignore the work of the late lamented Gubler on the influence of a vegetable diet on the chalky degeneration of the arteries. Vegetable food, richer in mineral salts than that of animal origin, introduces more mineral salts into the blood. Raymond has observed numerous cases of atheroma in a monastery of vegetarian friars, amongst others that of the prior, a man scarcely thirty-two years old, whose arteries were already considerably indurated. The naval surgeon, Treille, has seen numerous cases of atheromatous degeneration in Bombay and Calcutta, where many people live exclusively on rice.

A vegetable diet, therefore, ruins the blood-vessels and makes permaturely old, if it is true that man is as old as his arteries. It must produce at the same time tartar, the senile arch of the cornea, and phosphaturia. Having unfortunately seen these newest results of medical investigation confirmed by my own case, I have, as a matter of course, returned to a mixed diet. I can no longer consider purely vegetable food as the normal diet of man, but only as a curative method, which is of the greatest service in various morbid states. Some patients may follow this diet for weeks and months, but it is not adapted for everybody's continued use. It is the same as with the starvation cure, which cures some patients, but is not fit to be used continually by the healthy. I have become richer by one experience, which has shown me that a single brutal fact can knock down the most beautiful theoretical structure."

MEDICAL CHEMISTRY.

A NEW ALKALOID FROM JAVA COCA-LEAVES.

Dr. F. Geisel communicates a note to the *Pharmaceutische Zeitung*, in which he mentions that the narrow-leaved Java coca contains up to 2 per cent. of alkaloids, but only very little cocaine. The principle alkaloids are cinnamyl compounds, besides crystallizable cinnamyl-cocaine, as well as truxilline. From 20 kilogrammes of the alkaloids he, by fractionation, obtained 1 kilogramme of cinnamyl-cocaine, and from the mother-liquor containing the amorphous cinnamyl compounds he has been able to isolate, as a hydrobromide, an alkaloid bearing a great resemblance to the dextro-cocaine which Einhorn prepared from dextro-ecgonine. Of this alkaloid Dr. Giesel has secured 80 grammes. It possesses the characteristics of cocaine and nearly-allied bodies, so far as physiological action on the tongue and behavior towards permanganate are concerned. The hydrobromide and nitrite of the alkaloid showed the same sparing solubility in water as dextro-cocaine does, and, like it, the free base separates as an oil, which, on dissolving in ether, can be obtained in crystals. The alkaloid so obtained melts at 49° C., as compared with 46–47° C., the figure for dextro-cocaine, and 97° C., that of cocaine. The hydrochloride of dextro-cocaine is fairly difficult to dissolve in water, but dissolves more easily in alcohol, and crystallizes from both solvents in needles. The hydrochloride of the new base dissolves easily in water, but with more difficulty in alcohol, and crystallizes from the solutions in small and pretty prisms. Salts of the new body, even in very dilute solution, give a crystalline precipitate with potassium bichromate, whereas similar solutions of cocaine and dextro-cocaine remain clear, or give an oily turbidity. The alkaloid does not affect polarized light. Concentrated hydrochloric acid splits it up into benzoic acid and ecgonine, in the calculated proportions for cocaine, without giving, as in the case of dextro-cocaine, a difficultly soluble intermediate product. In other respects the alkaloid shows differences from dextro-cocaine, and Dr. Geisel's conclusion is that it is an isomer or homologue of cocaine. The author adds some criticism of Hesse's recent work on hygiene, in which he maintains the natural existence of that body.—*Chemist and Druggist.*

PHOSPHORUS MADE BY ELECTRICITY.

The *Birmingham Post* has published an account of a new factory, lately established at Wednesfield by the "Electrical Construction Corporation," for the production of phosphorus by electricity. Patents for the extraction of phosphorus from the raw material had been taken out independently by Dr. Readman, of Edinburgh, and Mr. S. Parker, the managing director, and Mr. A. E. Robinson, F. C. S., the chemist of the Electrical Construction Corporation. These patentees, it appears, have amalgamated their interests, and it is said they have experimentally proved the success of their plans. They are commencing the manufacture on a limited scale, but they have taken land which gives them space to extend their operations largely. At present only a limited number of furnaces are set up, but the machinery provided will be powerful enough to produce an electrical current capable of heating other furnaces when the premises are extended. The engine is of 700-horse power, and attached to it is an alternating dynamo nearly eight feet in diameter. From the dynamo the current is conducted to the furnace, and generates intense heat, by means of powerful arc carbons. The furnace, which is the invention of Mr. Parker, occupies a comparatively small space, being only about eight feet square, and less in heighth. It is fitted with a hopper at the top, which is so constructed that the phosphates and coal can be poured in without any heat or vapor escaping. The furnace being "air-tight," no smoke is generated, and the whole of the ingredients placed

within, with the exception of a little slag, which is drawn occasionally by a process of tapping similar to that at ordinary blast-furnaces, pass away in a vaporous condition through pipes and condensers, where the phosphorus is deposited in such a pure condition that it requires but little refining, though, for marketable purposes, it is afterwards formed into circular cakes. The cost of production is said to be much less than by any other system. The *Post* states that the whole of the patents have been acquired by the Phosphorus Company (Limited), by whom the works will in future be carried on. It may be interesting to state that the estimated consumption of phosphorus throughout the world is about 2,000 tons per annum, and the Wednesfield works hope to place in the market at least half that quantity each year, at a price which may probably have a marked effect upon the price of matches, low as they are retailed at the present day.

NEWS AND MISCELLANY.

REDUCTION IN RAILROAD FARES.

The Trunk Lines, the New York and Boston lines, the Southern Passenger Association, and the Central Traffic Association will transport persons from points on their lines to Washington and return at the price of one and one-third the regular fare on the following conditions:

1. There must be an attendance at the meeting of not less than 100 persons holding special certificates.

2. The going ticket must be purchased within three days before the opening date of the meeting.

3. Each person availing himself of the concession must pay full first-class fare going to the meeting, and must obtain a certificate from the agent of whom the ticket is purchased.

4. Those holding such certificates, when countersigned by the proper officer at the Congress, can obtain return tickets at one-third the highest limited fare.

Certificates are not transferable, and the return tickets secured upon certificates are not transferable. If any of them are sold or transferred, they must be redeemed at the highest first-class rate by the person making such sale or transfer.

No refund of fare will be made on account of any person failing to obtain a certificate.

Those who wish to avail themselves of this method of obtaining reduction in fares, should present themselves at the office for certificates and tickets at least 30 minutes before departure of trains.

It is absolutely necessary for each passenger before starting to obtain a certificate from the ticket agent of whom the going ticket is purchased, otherwise he can obtain no reduction in the return fare.

There will be no stop-over privileges on the return tickets, which must always be by the same route as the going ticket.

Members may obtain tickets on these conditions for their wives and members of their families, as well as themselves.

THE LAY OF THE LYMPH.

The following appropriate lines have appeared in the *British Medical Journal:*

Who'll kill the bacillus?
"I," said Herr Koch,
"With my lymph and syringe,
I'll kill the bacillus."

Alas! Doctor Koch,
With false hopes you fill us;
For firm as a rock,
Holds the field—the bacillus.

And assembled bacilli
Through a cultur'd bacillus
Say, "We're not quite so silly
As to let Herr Koch kill us."

"Must admit," owns Herr Koch,
"I can't kill the bacillus,
Only cut off the stock
Of supplies from bacillus."

Replieth Herr Virchow,
"No lack of supply;
From one organ driven
To another he'll fly."

So some vow with a twinge,
"No more shall you drill us
With your lymph and syringe,
You can't starve the bacillus."

ILLINOIS ARMY AND NAVY MEDICAL ASSOCIATION.

"The Illinois Army and Navy Association" was organized at Springfield, Ill., June 26, 1890, with Dr. Hosmer A. Johnson, of Chicago, as President, and Dr. John H. Rauch, of Springfield, as Secretary. The objects of the society are the promotion of social, historical and medical subjects con-

nected with the late war. All reputable physicians now living in Illinois, whether in practice or not, who served in the army or navy, during the late war, and all who were surgeons or acting assistant surgeons, who were with Illinois troops, and are now non-residents of the State, are eligible to membership. At the second meeting of the association, held in Springfield, May 18th and 19th, 1891, Dr. John H. Rauch was elected president, vice Dr. Johnson, deceased, and Dr. Edward P. Bartlett, of Springfield, Ill., was elected secretary. The association adjourned to meet in Chicago, at the time of the unveiling of the Grant Monument. This adjourned meeting will take place at the Grand Pacific Hotel, Chicago, Oct. 7th and 8th, 1891. The unveiling of the monument will occur Oct. 7th, at 2 P. M. Half fare rates can be had to Chicago at that time, upon all railroads.

MODERN MEDICINE.

First they pumped him full of virus from some mediocre cow,
Lest the small-pox might assail him, and leave pit-marks on his brow;
Then one day a bull dog bit him—he was gunning down at Quogue—
And they filled his veins in Paris with an extract of mad dog;
Then he caught tuberculosis, so they took him to Berlin,
And injected half a gallon of baccilli into him;
Well his friends were all delighted at the quickness of the cure,
Till he caught the typhoid fever, and speedy death was sure;
Then the doctors with some sewage did inoculate a hen,
And injected half its gastric juice into his abdomen;
But as soon as he recovered, as of course he had to do,
There came along a rattlesnake and bit his thumb in two;
Once again his veins were opened to receive about a gill
Of some serpentine solution with a venom in it still;
To prepare him for a voyage in an Asiatic sea,
New blood was pumped into him from a lep'rous old Chinee;
Soon his appetite had vanished, and he could not eat at all;
So the virus of dyspepsia was injected in the fall;
But his blood was so diluted by the remedies he'd taken
That one day he laid down and died, and never did awaken;
With the Brown-Sequard elixir they tried resuscitation,
He never showed a symptom of reviving animation;
Yet his doctor still could save him (he persistently maintains,)
If he only could inject a little life into his veins.—*Puck.*

PURIFICATION OF CHLOROFORM.

According to a telegram in the *Times* of June 24th, which has a somewhat commercial smack, M. Raoul Retet is arranging with manufacturers of chloroform in Berlin for the purpose of purifying this anæsthetic by means of intense cold—freezing it, in fact. He produces it absolutely pure, it is said. By his process he is able to reduce its temperature to—130° C. The impurities can, it is stated, be separated at—23° C. (the melting point of chloroform is—70° C.) We doubt whether this purification will rid it of its inherent dangers as an anæsthetic. Good chloroform as now manufactured from pure acetone is probably as chemically pure as commerce can supply it. Absolute chloroform has hitherto proved very unstable.

DEATH AFTER A DOSE OF SALOL.

Salol is usually considered a tolerably innocuous drug, but there are not wanting clinical observations which tend to show that, under certain circumstances at least, its use may be followed by dire results. Thus a case was some time ago reported by Aufrecht and Behm in which death followed its use in acute endocarditis, and more recently Dr. Chlapowski has published in a Bohemian medical journal an account of a case in which a similar fatal result followed a fifteen-grain dose ordered to a patient who was suffering from severe gastric symptoms, and who was being examined by Ewald's method. After taking the salol the patient became restless and unconscious, the pupils dilated, the pulse became irregular, there was constant vomiting, and the urine became dark, and contained salicylic acid. Death occurred twelve days later. At the necropsy there were found gastritis and hæmorrhagic enteritis, a gastric ulcer cicatrized at the cardiac end, chronic endometritis, and a cyst of the ovary. No doubt was entertained that the salol had caused the symptoms of poisoning.—*Lancet.*

THE RESIGNATION OF PROF. KOCH.

Dr. Robert Koch, though he has resigned his Professorship of Hygiene on his appointment as Director of the newly-founded Institute for Infectious Diseases at Berlin, still retains the title of Honorary Professor Ordinarius, which gives him the power of lecturing in the University if he sees fit.

FRACTURED RIBS IN THE INSANE.

The words heading this paragraph are the title of a highly instructive memoir by Dr. Claye Shaw in the new volume of the *St. Bartholomew's Hospital Reports.* He observes that nothing gives so bad an impression of the management of an asylum as the occurrence of fractured ribs amongst its inmates. Hence he endeavors to throw some light on the pathology of broken ribs in the insane. He has made experiments, and tabulates the weight required to cause fracture of the rib, and the seat of the fracture. He concludes that a considerable difference is found to exist not only in the weight of the ribs on the two sides of the body, but also in the average breaking weight. The lighter rib is often found to bear the heavier weight, and there appears to be no proportion between the weight of the rib and the number of pounds that it is capable of sustaining, whence it would appear that physical conditions of structure have no more to do with the strain-resisting power than chemical change. Persons suffering from disease of the heart or blood vessels bear less strain than others. Persons suffering from advanced constitutional disease, such as phthisis, may have ribs that support a strain much above the average, and hence there is no direct relation between constitutional strength and that of the ribs. When a blow causes fracture, this is dependent not so much on the weight of the rib and its power of bearing strain as on other conditions. Altogether the idea that the ribs of the insane are more brittle than those of the same is true only to a very limited extent, and is almost confined to those affected with degeneration of the circulatory system. Dr. Shaw rightly notes that he has not had the opportunity of testing the breaking weight of the ribs of general hospital patients. Attendants at asylums, he observes, knowing the penalties, are very careful not to give violent blows when patients are in such a position that the natural elasticity of the ribs can act, and that, even if they did, such blows would not cause fracture. Whether the person be sane or insane, a slight blow given when the body is in a certain position will cause fracture, and when that does occur, it is more often than not done accidentally—*Brit. Med. Jour.*

THE COMPOSITION OF THE LONDON FOG.

An important paper on London fog was read at the Hygienic Congress by Dr. Russell, who has made it the subject of special study. He says, first of all, that the number of fogs is constantly increasing in the metropolis. From 1870 to 1875 there were 93 of them; from 1875 to 1880, 119; from 1880 to 1885, 131; and from 1885 to 1890, 156. This is the direct result of the increased consumption of coal, which amounted to 6,400,000 tons in 1890 as against 4,400,000 in 1885. Dr. Russell claims to have proved that increased smoke makes fogs more frequent, as well as thicker, by adding to impurities in the air. Fogs, he adds, are especially likely to occur in still, cold weather. The composition of London fog is as follows:

Carbon,	39.0
Hydro-carbons,	12.3
Organic traces,	2.0
Sulphuric acid,	4.3
Hydrochloric acid,	1.4
Metallic iron and magnetic oxide,	2.6
Ammonia,	1.4
Mineral matter, chiefly silica and ferric oxide,	31.2
Water,	5.8
	100.0

The actual effect of fog upon human life is uncertain. It has been noticed, however, that fogs in cold weather are accompanied by a rise in the death rate. This may be due chiefly to the cold, but it must be remembered that cold is intensified by fog, which obstructs the rays of the sun. There is no doubt of the injurious effect of fog upon vegetation, which is affected, even at a distance of thirty or forty miles from London. It is the sulphur, probably, that does the mischief. There seems to be no room for doubt that the number of fogs will increase in London in exact proportion to the growth of the city, unless some means are discovered of getting rid of the smoke, which comes, it must be added, from the domestic hearths, not from factories. How this problem will be solved, if ever, no one can now tell. Two plans are suggested, one, the use of improved grates, the other, the substitution of gas for coal fires.

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Clinical Lectures.

AMPUTATION OF THE FORE-ARM—SEBACEOUS CYST—RACHITIS—CANCER OF THE BREAST.

BY PROFESSOR ROSWELL PARK,

BUFFALO, N. Y.

AMPUTATION OF FORE-ARM.

Gentlemen:—The first case was a patient whose fore-arm had been amputated ten days before. The operation had been done with every antiseptic precaution and there had been no pain nor fever nor other symptoms calling for a removing of the dressing. The deeper dressings were somewhat moist from perspiration or some discharge, but there was no evidence of suppuration. With the exception of a few points at which the skin had not quite healed, union by first intention had occurred in ten days under the primary dressing.

SEBACEOUS CYST.

The next patient was a young man who exhibited a swelling just in front of the hyoid bone, of about the size of a horse chestnut, dark in color and fluctuating on pressure. The patient complained of tenderness and much discomfort on account of the growth, and stated that a similar one had been removed from the same place two years ago. Pressure on the tumor caused its contents to exude, much resembling a Pharaoh's serpent as it burns. This phenomenon showed the tumor to be a sebaceous cyst and its discoloration, the pain and local heat and the appearance of the contents showed that it was inflamed and suppurating. Dr. Park remarked that such cysts might occur almost anywhere about the body though they were most common about the head and neck. He had once removed one from the toughest part of the heel. He called attention to the fact that the opening through which the matter was pressed was the natural opening of the sebaceous duct in which the contents had accumulated so as to form a cyst. From the irritation of clothing, etc., inflammation in such cysts was a common occurrence and there was nothing to prevent the entrance through the duct of micro-organisms which would cause the breaking down of the sebaceous matter into pus. Such tumors had a tendency to recur and, therefore, the proper method of treatment consisted in a removal of the sac whenever possible. Whether this had been done at the former operation could not be learned from the patient. The blackness of the skin overlying the tumor indicated that it would soon slough away if nothing were done and thus a spontaneous evacuation of the cyst would take place. After injecting a cocaine solution, an incision was made, opening the tumor and allowing the semi-purulent sebaceous matter to escape. Contrary to the usual state of affairs, the cyst wall was so adherent to the surrounding tissues that it could not be removed readily. The pyophylactic membrane (a term which Dr. Park prefers to the misleading one of pyogenic membrane) was, therefore, cut away in pieces, and to make sure of its extirpation, the cavity was swabbed out with a caustic; carbolic acid being used on account of its combining the properties of a caustic, an antiseptic and an anæsthetic. The cavity was then packed with antiseptic gauze so as to ensure its healing by granulations from the bottom, and a dressing applied.

RACHITIS.

The next patient was a child eight years old with marked evidences of rachitis. There was a very exaggerated anterior curvature of the right femur and much lateral curvature of the left femur and of both tibiæ. The deformity of the bones caused knock-knee, uncertainty of gait and a peculiar carriage of the body. The thighs had been previously cleansed and protected with antiseptic band-

ages in anticipation of the operation. A small incision was made just above the inner condyle of the femur, the chisel inserted and osteotomy performed. Dr. Park referred to this operation as a purposely inflicted compound fracture, all the circumstances being favorable and particular pains being taken to preserve asepsis. An antiseptic dressing was bound over each wound and after a little delay the deformity was corrected and a plaster of Paris bandage applied to each limb.

A woman of fifty presented herself with a tumor pouching into the cheek from the jaw. There was no history of tumor in the family. The patient had known of the existence of the growth for nineteen years. The growth was painless although annoying on account of the mechanical interference with talking and eating. It had grown very slowly till four years ago when the patient conceived the idea that if she had her teeth pulled, the growth would be checked. The removal of the teeth, however had rather the opposite effect though the increase in size had not been rapid.

By the history of its long duration and the absence of adhesions, ulceration and pain, malignant tumor was excluded. The most common non-malignant growths from the jaw, Dr. Park said, were fibrous or cystic or both combined. Fibrous tumors sprang very frequently from the periosteum. Any kind of tumor springing from the jaw was called epulis by a certain class of writers but he objected to this general use of the term epulis which he thought should be restricted in its application to a fibro-sarcoma very slightly malignant in the beginning but which may develop increased malignancy. The present tumor was moveable and extended back no further than the end of the alreolar process and did not reach as high as the orbital plate. There was no fluctuation and the diagnosis was made of a fibroma which might possibly contain a small cyst in its interior. Although the growth could have been removed much more easily by an external incision for the cosmetic effect the opening was made from within the cavity of the mouth. Only the fingers and a pair of scissors were used in dissecting the tumor out of the cheek. It was a hard, somewhat modulated mass, the size of a hen's egg and entirely fibrous in its nature.

CANCER OF THE BREAST.

The next patient was a woman 45 years of age, who had had eight children. Although there was no history of cancer in the family and no history of any lesion of the breast—not even a fissure of the nipple—yet a year ago a lump had appeared in the breast and had increased in size and now presented unmistakable evidences of malignancy. Of late the patient had suffered much from pain, referred as is often the case, to the arm. This was due to interference with the intercosto-humeral nerve.

Dr. Park said, "A tumor of any considerable size occurring in the breast of a woman at about the menopause when there is the history of even the slightest increase in size, accompanied by a certain fixation of the growth in the surrounding tissues, is almost always of cancerous nature." If with this condition there is some retraction of the nipple and an enlargement of the glands in the axilla, or along the border of the pecteralis major leading to the axilla, the diagnosis becomes still more certain, and but one advice can be given to the patient as to treatment if the case is seen early enough—immediate removal. In removing the mammary gland alone for cancer, we afford only half the benefit which the surgeon can give. We should remove in addition the cellular tissue and lymphatic glands of the axilla. It is the general opinion of the best surgeons the world over, that the axilla should be "cleaned out" in all cases of cancer of the breast when a radical cure is possible. Even if all the cancerous tissue is not removed by the operation, death is usually delayed. I might enumerate five purposes which we may have in view in operating on cancers. First of all, the radical removal of the growth which we often achieve if the case is seen early enough. Secondly, we operate later for temporary relief and to prolong life, such operations are frequently repeated. Thirdly, we operate sometimes purely for relief of pain, removing structures that are highly sensitive on account of the disease. A fourth indication for operation is excessive sloughing. The growth may be scraped repeatedly if necessary. A fifth indication is hæmorrhage as in a fungous cancer. The operation for the removal of the breast is simple but sanguinary. It is not dangerous. An elliptical incision is made, the nipple being removed, leaving enough skin, if possible, to close the wound after the removal of the gland.

In preparing for the operation the razor was used, not because of an excessive amount of hair, but because the razor is regarded by Dr. Park as an efficient dermal curette, and because he considers that the fine down is as

capable of lodging bacteria as true hair. The cancerous mass had grown outward and was just on the point of ulcerating. It was removed according to the method indicated as thoroughly as possible, but it had extended so far that Dr. Park expressed his doubts as to the ultimate cure of the case. The tumor was found to be, as had been predicted, a scirrhous cancer, the only form of carcinoma which is at all common in the breast.

COMMUNICATIONS.

RIGHT OCCIPITO-POSTERIOR DELIVERY.

A. L. BENEDICT, M. D.,
BUFFALO, N. Y.

On Thursday, June 18, I was called to see Olive S., aged 19, in labor with her first child. Two months prior I had prescribed for her on account of gonorrhœa, but the treatment had not been persisted in and there still remained suppuration in one of the vulvo-vaginal glands. There was no very definite history of symptoms that could be construed as indicating gonorrhœal involvement of the uterus, tubes, or peritoneum.

The patient stated that she had had what she took for labor pains on Sunday, and that since Tuesday night the pains had been more acute and quite frequent. Two physicians had seen the case in turn before I was summoned. At 12 o'clock Thursday noon, I made my first examination. The child occupied the normal axis of the uterus, the head was down, the fœtal heart-beat could be heard indistinctly and momentarily at different points below the umbilicus and the fœtal movements were quite active. The cervix was thick and tough. The os was about the size of a quarter, distended by the unruptured bag of waters. The head had apparently not yet engaged. A bichloride douche was given and an enema ordered.

At 10.30 P. M. the os was a little larger, the fœtal head was lower but had not yet engaged. It seemed to distend the cervix anteriorly but behind, the finger met with no obstruction through the amniotic sac except that something soft, apparently an arm or leg or the cord, could just be touched. The heart beat could be heard distintly below the umbilicus, first on the left side, then on the right of the mother's abdomen. It could not be heard in the same place long enough to be counted. The patient had suffered considerable pain since noon.

At 6 A. M., June 19, the waters broke, about a vesselful being discharged. At 7.15 I found the os the size of a half dollar, with the head engaged. The heart-beat could now be distinctly heard in its usual location obliquely downward and to the left from the umbilicus. It was 156 to the minute. The patient slept most of the time from the breaking of the waters until 9 o'clock when the pains began again. At 10.15 another examination was made showing that some progress in labor had occurred. At 2 P. M. the cervix was dilated nearly to its full extent but it still retained the thickness and inelasticity already referred to. Other examinations were made at 5 and at 10 P. M., slow progress being noted at each examination. Full dilatation of the cervix was not quite accomplished at 10 o'clock. The labor, although delayed considerably after the rupture of the amniotic sac was not dry, in fact there had apparently been a condition of moderate hydramnion.

At 1.30 A. M., June 20, the head was on the perineum and the pains were frequent and severe. At 2.10 the head was born, the occiput pointing posteriorily and to the right. The mechanism of final expulsion, as aided by the hand, being first flexion till the occiput emerged posteriorly and then extension followed by spontaneous external rotation. The cord was found to be hooked over the right shoulder. It was slipped off and the body of the child extracted. The child made only one or two feeble attempts at respiration. The throat was clear but plugs of tenacious mucus hung from the nostrils, having evidently been inspired from the vagina. These were removed, the cord tied and cut and artificial respiration tried for some minutes. As this was not successful, the child was immersed in hot water but no reflex effort at breathing could be evoked. Repeated brief auscultations of the chest showed that both the heart and the lungs were quiet. After about twenty minutes, artificial respiration was abandoned and attention turned to the placenta. Meanwhile the mother had been resting without pains. After a little manipulation by Crédé's method and two pains, the placenta was expelled, accompanied by a double handful of clots. I would like to protest, in passing, against the forcible expulsion of the placenta by the external hand. It is cruel, unnecessary and unsafe to exert all one's strength in pushing the uterus against the spinal column as some men do.

The proper idea, it seems to me, is first to stimulate a uterine contraction and then to brace the hand against the uterus so as to give it the same degree of support which the abdominal muscles do in the second stage but which they can no longer render on account of the diminished size of the uterus. If moderate pressure from without is ineffectual after a reasonable time, it is better to remove the placenta by the hand in the uterus using proper antiseptic precautions than to exert violent pressure.

The placenta in this instance was pale, somewhat friable on the uterine surface and the decidua was thickened. The secundines had rather a bad odor. Fluid extract of ergot, 2 c. c. was administered by the mouth and a 1–5000 warm bichloride injection was given. After some further delay, the patient was cleansed, an occlusion bandage applied and direction given to let the breasts—which were unusually large—entirely alone.

At ten o'clock the patient was doing well, having flowed very little. An autopsy on the child's body was made at which the following notes were taken: Female child (confer rapidity of heart-beat), length 17 inches, circumference of head 12 inches, length of cord 18 inches. Head molded so that the occiput is flattened, the anterior portion of the skull projecting upward. Large caput succedaneum over left fronto-parietal region. Very little vernix caseosa. Reddish patches under axillæ and over arms. Petechiæ over dorsa of fore-arms and hands and over abdomen. Peritoneum distended with reddish-yellow fluid, almost entire atelectasis of lungs. The liver weighed 5¾ ounces, the spleen one ounce, the estimated weight of the body being seven or eight pounds. According to Prof. Hirst of the University of Pennsylvania, the normal ratio of the weight of the spleen to that of the body is 1–300 and for the liver the ratio is 1–30. In this case the ratios were approximately 1–120 and 1–122. Although the suspicion of syphilis existed, no positive evidence of it could be found. An examination for fatty metamorphosis at the lower epiphyseal line of the femur could not be made on account of the objection of friends.

On the afternoon of June 21, the day following the completion of labor, I was called in haste to see the patient. She had been somewhat irrational and about five o'clock she had jumped from bed and crossed the room when she almost fainted. The pulse was found to be weak and rapid, the temperature was slightly over 100°, and the lochia were fœtid. Whisky was given to relieve the faintness and directions were sent to an assistant to give an intra-uterine douche, but, on account of a misunderstanding, only a vaginal douche was given. A prescription was left for quinine capsules, containing fifteen centigrammes each, with directions to take two that night and afterward three daily.

The next morning a vaginal followed by an intra-uterine douche (1 : 4000) was given and in the afternoon, a vaginal douche alone of the same strength was given. This treatment was repeated Tuesday and Wednesday, the fœtor of the lochia being diminished, but not removed, and the temperature ranging from 100° in the morning to not quite 103° in the afternoon. Thursday and Friday only vaginal injections were thought necessary, as the temperature fell nearly to normal, and a good recovery has since been made. There was slight caking of the breasts, which disappeared under the "let-alone" treatment. They were, however, supported by a bandage.

As I began my attendance on the case with a bichloride douche and followed the completion of the third stage of labor with another, used a bichloride solution for the hands before all manipulations and applied an antiseptic occlusion bandage after labor, I do not feel responsible for the septic element which entered into the case. The tedious labor predisposed to it and the gonorrhœal discharge and possibly earlier digital examinations would fully explain it. Forceps were not used, as at each examination some progress was noted. Rest was secured once by the use of morphine, later by bromide of potassium, one gramme and acetanilid, twenty-five centigrammes.

I will frankly admit an error in diagnosing the position. The child was plainly in the normal axis of the uterus and pelvis, the skull was presenting. Owing to the resistance of the perinæum and to the density of the cervix, the vaginal examination was not very satisfactory. Early in labor only a small circle of the fœtal skull could be felt, later the land marks were obscured by the caput succedaneum. On account of the thickness of the abdominal walls and the excess of liquor amnei the limbs of the fœtus could not be felt anteriorly and the distinctness with which the heart sounds were heard after the head had engaged, led me to believe that the child's back was turned anteriorly. It was not until late in labor, therefore that the true condition was appreciated. I am inclined to think that the moveable body which I felt behind the

head early in labor was the cord which had prolapsed far enough to catch over the right shoulder. It does not seem, however, as if it could have been shortened sufficiently to have delayed labor.

APPENDICITIS.

BY WM. L. CONKLIN, M. D.,

ROCHESTER, N. Y.

(*Read before the Monroe County Medical Society, May, 1891.*)

REPORT OF CASE.

Wednesday, December 3rd, 1890, I was called to see Chas. B.; 19 years of age; a shoemaker by trade. He gave a history of uniform good health up to that time.

For the relief of constipation, which had been troublesome for a few days, he took a cathartic Monday evening, which resulted in a free movement Tuesday morning. That afternoon some tenderness of the bowels was complained of, and the following night he was awakened by severe pain in the abdomen. When seen Wednesday morning the pain had diminished, and was confined to the right iliac region. There was slight tenderness on firm pressure over the vermiform appendix. During the afternoon the pain gradually increased, and opiates were given for its relief. Several hours of sleep and partial relief of pain were secured by a moderate use of morphine that night.

2nd day. Pain was not severe in the morning, but tenderness had increased and was most marked near the McBurney point. During the forenoon pain was complained of again. I made a diagnosis of appendicitis and asked that counsel be called. Dr. Zimmer saw the patient that afternoon, and after a thorough examination, confirmed the diagnosis of trouble in the region of the appendix.

He thought the time for operation had not come and advised a continuation of the morphine in sufficient quantities to control pain. Poultices were applied but could not be borne. An enæma of soap and water brought away a small quantity of fœcal matter.

3rd day. Though a thorough examination was made, under chloroform, no tumor could be detected, either by abdominal palpation or through the rectum. There was great rigidity of the abdominal muscles even after a free use of the anæsthetic. In the afternoon the patient was seen by Drs. Whitbeck and Zimmer. It was not thought that pus had formed at that time and further delay in operating was deemed advisable. Troublesome nausea appeared for the first time. An ounce of castor oil was given followed by ½ oz. epsom salts. No effect.

4th day. Gave grs. x calomel, followed by 2 ozs. solution citrate magnesia every hour for four hours. No effect.

5th day. Nausea had disappeared. A rubber tube was carried about 12 inches into the bowel and water and glycerine injected. This resulted in two or three evacuations containing some solid fæces.

6th day. Still complained of pain. Gave 12 oz. solution citrate magnesia in two doses. This was followed by two liquid stools.

7th day. I was able to detect a small swelling, an inch to the inner side of the anterior superior spinous process on a line drawn from that process to the umbilicus.

8th day. Severe pain complained of at one time during the night. The presence of fœtid pus was demonstrated by introducing a hypodermic needle at the point of greatest tenderness. That afternoon an operation was performed by Dr. Zimmer, assisted by Drs. Wilson, Dow and Combs. A four-inch incision was made parallel with the crest of the ilium and Poupart's ligament, with its center one inch from the anterior superior spinous process. After careful dissection through skin, superficial fascia, aponeurosis of external oblique internal oblique, transversalis and transversalis fascia, the abscess was found and evacuated. The pus cavity extended upwards parallel with the crest of the ilium and contained an ounce or more of fœtid pus. The appendix could not be found. It was thought that it had either ulcerated off or become embedded in new tissue. The cavity was washed out with boiled water and a rubber drainage tube passed through the incision and a counter opening above. The incision was closed with catgut sutures passing through the skin and superficial fascia and an antiseptic dressing applied. A fœtid discharge continued for two weeks, the odor then disappeared and the wound healed rapidly and completely.

Remarks.—I wish to refer briefly to a few points suggested by the study of this case, which seem to me of special interest, and upon which I should be glad to hear an expression of opinion.

First, as to diagnosis. In a paper on "Appendicitis," by Prof. Lewis A. Stimson,

read before the New York Surgical Society, Oct. 8th, 1890, (*N. Y. Medical Journal*, Oct. 25th, 1890) I find the following:

"The localization of the maximum pain, or of the only pain, on pressure at or very near the point indicated by Dr. McBurney, two inches from the anterior superior spine of the ilium, on a line drawn from it to the umbilicus, has been constant, and, in pointing out this symptom, Dr. McBurney has rendered us a service which it is difficult to estimate too highly. It has made the recognition of appendicitis, in its early stages, at least, easy for everyone."

It is doubtful whether all would place as high a value upon the McBurney point as does Prof. Stimson, but I am told that in the discussion of the subject at Albany last winter its importance as a means of diagnosis was fully recognized. In the case just reported the point of greatest tenderness was a little to the outer side of the McBurney point. But though it may be a comparatively easy matter to diagnose appendicitis in its early stages, it is by no means easy to say what its course will be—whether it is to end quickly in resolution; result in the formation of an abscess which will seriously menace the life of the patient, or by an unprotected perforation light up an almost surely fatal peritonitis. These are hard problems to solve, and, unfortunately the aids to their solution are not numerous or altogether trustworthy.

The temperature does not seem to be a reliable guide. In the case reported it was 98° the morning of the first day; 101° and 102° the second and third days; subnormal the 4th; normal the 5th and 6th, and slightly elevated the 7th and 8th. On the 4th day, when the mouth and axillary temperature were sub-normal (97 1-5) the rectal temperature 100 2-5, a difference of 3 1-5°. In another case (Stimson's)there was a difference of 6¼° between the temperature of the mouth and that of the rectum on the 6th day. Whether this unusual difference is of any diagnostic value I am unable to say. Dr. Chas. K. Briddon thinks that when the pus forms in the pelvic cavity, to a limited extent, and becomes encysted, the temperature falls. Prof. Stimson says: "If the temperature is above 102° two days after the beginning of the attack, suppuration is imminent or already present."

The pulse is thought to be of more value than the temperature as an aid to diagnosis; but it may be found to furnish very unsatisfactory information, if any, especially if the abscess is small. In the case of Chas B. it did not exceed 84 and was 78 just before the operation.

Great pain may be followed by resolution, and slight pain by fatal perforation; severe pain appearing suddenly during the course of an attack would certainly be looked upon with suspicion. It may be impossible to detect a tumor, or a dull percussion note for several days after the first symptoms appear. I was unable to do so until the 7th day. It is certainly not by attention to any one symptom, taken in connection with the time which has elapsed since the attack began, that we may hope to obtain a true idea of each individual case.

The difficulty of determining the pathological condition present after a diagnosis of appendicitis has been made, taken in connection with the dangers of delay, furnishes a strong argument in favor of early operative interference. In a series of 11 cases, with 10 recovered, recently reported by Dr. McBurney, (*N. Y. Med. Jour.*, Dec. 21, 1889) an operation was performed in from 40 hours to 7 days. In 9 of the 11 cases the appendix was removed. Pus was found in 7 or more. In one case operated in 49 hours after pain was first noticed the appendix consisted of a thin-walled sac, shut off from the cæcum by stricture, and containing at least half an ounce of fœtid pus. That a rupture of this sac, producing a fatal peritonitis, would have resulted from a delay in operating of a few days, or even hours, is at least probable. In another case, reported by Dr. Lange, "Not only perforation but extensive destruction of the appendix and far gone infection of the peritoneum had been found by the middle of the second day." Out of a series of 21 operations reported by Dr. Stimson, 5 were performed in the early or doubtful stage without a death, and, as he says, without a moment's anxiety beyond that which belonged to the taking of the step. Dr. McBurney says, "If it can be shown by future experience that the exploratory incision for inspection of the diseased appendix is much more free from danger than the expectant treatment, then there could be but one answer to the question—what is the best treatment?"

The use of certain terms in articles on this subject may fairly be criticised, because they do not accurately describe the true pathological condition.

We read of *extra*-peritoneal abscess resulting from appendicitis. If an abscess results from inflammation of the appendix it must certainly be of *intra*-peritoneal origin, and should be called an intra-peritoneal abscess,

unless the pus has forced its way through the peritoneum, and there is abundant proof that this latter condition is a very rare one indeed. McBurney says further that in not a single one of the early operations for appendicitis which he has done or seen done has there been the slightest doubt as to the fact that the incipient abscess was entirely within the peritoneal cavity. Stimson says, in speaking of a series of 21 cases already referred to: "The pus in all the cases, with possibly one exception, was *intra*-peritoneal." This is an important point in the pathology of appendicitis, because of its bearing on the questions of operation. In the evacuation of an abscess the peritoneum must be cut to a greater or less extent, whether the oblique incision is made, or the one along the outer border of the rectus. This being the case it would seem that, as a rule, the latter is to be preferred, because of the better opportunity it gives for the removal of the appendix, if that should be deemed advisable.

A CASE OF FRACTURE AND DISLOCATION OF THE SPINE WITH OPERATION.*

*Read before the Ohio State Medical Society, June 18, 1891.

BY A. W. RIDENOUR, M. D.,

MASSILLON, OHIO.

In view of the rarity of these cases with the almost invariable result, I have thought proper to report a case that marks a new era—at least in my practice.

Dec. 11th, 1890, Martin Nye, aged 28, laborer, while driving through a shed on a load of lumber was caught between an overhead beam in such a manner as to crush the center of his back forwards at an acute angle, frightfully lacerating and crushing both hard and soft parts in that region.

Within half an hour after the accident I found the patient pulseless, the skin cold and clammy, the respiration sighing; very restless; jactitation, suffering frightful pain in back; sensation and motion absent from injury down; knee-jerk absent; reflex in legs absent.

On inspection at seat of injury I found a depression of fully one inch corresponding to seventh dorsal vertebræ, with absence of spinous process of eighth dorsal. This at once led me to inform the patient and friends of the exceeding gravity of the case, and that the only hope of life lay in a speedy operation. Consent was readily given and at once carried out.

With the usual and necessary antiseptic preliminaries an incision about twelve inches long was made, commencing at the third and terminating at the ninth dorsal, separating muscles from either side and exposing the bony roof of the cord from the sixth to the ninth dorsal, inclusive. The muscles were crushed, soft, pulpy and mangled beyond recognition in the region of injury. The lamina of seventh dorsal was broken and separated from the body; the transverse process on either side of seventh was fractured, and the articulation for the ribs torn completely off; the ends of the ribs stuck up in the wound like two fists; the *body* of seventh vertebræ was dislocated forwards fully one inch, nearly slipping out anteriorly. The spinous process of seventh vertebræ was split and crushed. The spinous process of the eighth dorsal was not only split but actually inverted penetrating the cord and crushing it. The lamina of eighth was fractured, and the body fractured, but not dislocated. The membranes were punctured and badly lacerated at different points with full hæmorrhage in the aracnoid space. The cord was crushed at the juncture of the seventh vertebræ by the inverted spinous process of eighth; the cord was carried forward with the dislocated seventh vertebræ; and there was compression at the juncture with the sixth and eighth. Altogether I can not conceive of a more frightful injury unless we might include cutting off the cord and the immediate death of patient. The trephine was not resorted to because it did not seem necessary or safe, as the bones being soft can be separated readily with safer bone instruments.

All of the bony roof, from middle of ninth dorsal to and including middle of eighth dorsal vertebræ was removed. Passing my finger between the body of seventh dorsal I elevated it into position, smoothed all rough or sharp bony prominences; removed all clots; stopped all hæmorrhage; replaced the dislocated ribs as well as I could without any articular facets, and placed strands of catgut along the bottom of the wound in such a manner that the cord would not come in contact with them, or in fact with anything, (requiring some care here in the disposal of remaining bones and overlying muscles). The muscles were sutured carefully on either side; then sutured the skin; and finally applied a dry dressing.

The after treatment of this case was un-

eventful. Sensation returned at once in both lower extremities, motion was perceptible in the recti muscles at end of the 4th day. A catheter was used to pass urine until the 7th day when normal micturition returned. There was no control over the spinchter anii until the end of the 1st week. The knee-jerk was restored at end of 2d week. He could raise his limbs from bed at the end of the 5th week. He could walk with crutches at the end of three months. I applied plaster-of-paris jacket for support at end of 2d week.

The wound healed primarily in one week, without any pus and with three dressings. No fever at any time. Urine did not present any albumin or sugar, no casts or abnormal deposits, sp.-gr. 1.020.

The patient suffered no pain after the operation ; no atrophy of muscles of the lower limbs since the operation ; the joints were not thickened. The patient walks about with the aid of a cane, June 5th, 1891.

The patient is under the care of Dr. Marchand, of Canton, and is at the Stark county Infirmary. The Doctor reports the patient rapidly recovering his bodily vigor ; can get around rapidly ; and that the plaster was removed during April. *There is no deformity.* I would have wished the plaster bandage had remained on longer, but it seems that no ill effects followed its removal. I was kindly assisted in the operation by Drs. Miller and Reed, of Massillon.

The only plea I have to make in these cases where the diagnosis is made, is for an immediate, thorough and careful operation. A few hours delay, in my opinion, is sufficient to render the operation futile, and I have no hesitation in placing the cause of failure in so many of these operations to this cause. About eight years ago I reported a case to this society where I had made the operation three years after injury with the result of complete failure, the patient dying two weeks after of acute albuminuria.

But in doing this work the utmost care is required not only in removing all bony or other foreign material from the vicinity of the cord, but that no possible chance for subsequent hæmorrhage or pressure can occur, as even the pressure of a super-imposed muscle will be sufficient to deprive the cord of functional activity, or a small shaving of bone will cause inflammatory softening and death. Slight hæmorrhage will cause a clot that will act more rapidly than in the brain in causing death ; but the operation can be done and should be made safe by care and without hurry, and I will repeat, no patient should be allowed to die without an attempt to save him.

TRAUMATIC PARALYSIS.[1]

BY F. J. GRONER, M. D.,
GRAND RAPIDS, MICH.

I introduced this topic before the Section of Surgery with the desire that some knowledge may be added to such an important subject, slighted as it is in our text books on surgery. The persistence of the present generation in bringing suits for damage against the attending physician makes it very important that the literature in this special field be advanced. Paralysis from injury is not uncommon, and it may as likely occur in your first case as in your second hundred.

I will illustrate my subject by giving you the history of several cases.

Case I. A young man in good health, aged 17 years, was struck by a falling tree. The patient was brought six miles on a logging car, and I saw him three hours after the accident. He was then in a state of profound collapse, almost pulseless, showing the effect of severe injury. I gave ¼ grain morphia and 1–150 grain of atropine hypodermically and ordered external heat and brandy administered freely. I saw the patient several hours later. Condition slightly improved. I found fracture of right thigh, which I reduced, and severe injury of right shoulder and arm. As there was a relaxed condition of muscles and ligaments about shoulder joint, I applied a well padded shoulder cap and through splint to back of arm and forearm for support, as I intended to have patient moved to the Hospital the next day. The patient had not completely rallied from the shock the next morning. This showed the severity of the injury. At the Hospital I applied Buck's extension, for fractured thigh, removed the support from the arm and applied an evaporating lotion. The entire arm, forearm and hand became very much swollen, so much so that the entire arm was covered with blisters from the passive hyperæmia, and in many places there was necrosis of superficial tissues ; the scars still remain. I at one time feared gangrenous sloughing of the entire tissue of the arm. The swelling gradually subsided and at the end of the fourth week, there was such

[1] Read before the Surgical Section of the Michigan State Medical Society, June, 1891.

marked anæsthesia of the limb that we suspicioned paralysis, and so informed the patient and relatives.

In spite of friction, electricity, iodide of potassium, strychnia, etc., there is complete paralysis of all of the muscles of the shoulder, arm and forearm. The skin took on a glossy appearance; disorders of secretion, eczematous eruptions; there is practically complete atrophy of the muscles. The fingers are in a state of flexion so patient can lift and carry a pail of water. This is the only use that can be made of the arm. Electrical contractility is almost entirely lost.

One interesting feature in this case is, I have been charged with causing the paralysis. My reply is, "I was not the falling tree." Some physician suggested to the patient that I bandaged the arm too tightly and this caused the paralysis. This I deny in toto as the felt splints were heavily padded and secured by a many tailed bandage very loosely applied, and as I removed the dressing myself the next day, I found no constriction or evidence of pressure. You may ask why I applied support if there was no fracture or dislocation? I did it to keep the parts at rest while the patient was being moved to the Hospital, and to satisfy friends and relatives who were looking on. In private practice should you find a severely bruised member and do nothing for it you would be accused of neglect, especially if dealing with an ignorant class as in this instance.

To disprove the accusation that the dressing had anything to do with the paralysis, I will give you the history of a similar case with like result where no dressings whatever were applied.

Case II. Janury 21st, 1890, I was called to see a patient who was struck by a falling tree. He was brought ten miles from the woods to his home in Big Rapids. I saw the patient four hours after the accident. He was about twenty-five years of age, and had every appearance of previous perfect health. He was suffering from shock, but not quite so severely as case 1. He was struck on left shoulder and back. I found evidence of fracture of 6th and 7th ribs. The skin was not broken but evidence of severe bruising could be seen. Patient expectorated blood and a slight traumatic pneumonia followed. The fractured ribs were strapped, a wide bandage applied around the body and the elbow and forearm supported by a sling. There was some degree of swelling but not so extensive as in case 1. The patient had no control of deltoid or muscles of arm or forearm, and as there was partial anæsthesia and limited electrical contractility my prognosis was atrophy and permanent paralysis. Feb. 11th, I called in two physicians to examine the case. (This is a very important matter for self-protection.) They thought improvement would follow the use of the faradic current, but it did not. The atrophy and paralysis are as complete as in the first case reported. And this was not the result of tight dressings as no dressings were applied.

There is a case in Big Rapids, in which a man aged 50 years, received a supra-condyloid fracture of the humerus and there followed complete paralysis of forearm and hand. There is no evidence whatever that the treatment was not perfectly proper; there is no displacement of fragments or callus pressing on nerve. I have exhibited these three cases to the members of the Union Medical Society of Northern Michigan.

It has occurred in my experience repeatedly to pass my opinion as an expert on patients with similar conditions. So the cases I have reported are not rare ones. I have always been asked if the doctor who managed the case was not liable for damages. In fact the lawyers informed my first case that if he could get the doctors to swear that I was to blame for the result, it was advisable to bring suit against me. I have seen many cases of traumatic paralysis of the deltoid, and apparent luxation from loss of support. This muscle usually recovers its functions on the application of proper treatment.

Those of you who have had extensive experience with fractured legs have observed many cases of crutch paralysis. Sensation and motion are rapidly restored on dispensing with the crutches and applying a battery.

In 1883, I assisted in cutting down on the musculo-spiral nerve. It was almost covered in a bed of callus after a supra-condyloid fracture. All the parts supplied by this nerve were paralyzed. Sensation and motion were completely restored by chiseling away the callus.

There have been repeated reports of paralysis following the injection of ether; the ether having been injected in the neighborhood of the nerve paralyzed. Alcohol produces the same effect and experimental study shows that the portion of the nerve with which the alcohol comes in contact undergoes necrosis.

Alamertine reports a case of paralysis and atrophy of the muscles of the arm from wound of the hand by a fragment of hot

iron. He considers it a case of reflex muscular atrophy. It is necessary to be very guarded in prognosis, for if the result is not as good as you promise, others will say the bad result is due to lack of skill or carelessness. You will meet with fracture of the humerus far down where the musculo-spiral nerve is so damaged that the extensors and supinators become powerless, and this condition remains permanent.

Cases come under the care of the surgeon often following what at the time appeared to be a trivial injury, such as a prick of a needle or splinter stuck in the finger. The whole arm finally becomes very much wasted from the neuritis.

I could continue with a list of cases embracing other parts of the body, especially the lower extremities. My illustrations are sufficient for thought on traumatic paralysis without extending them.

The particular question I raise is, why should a severe blow upon the shoulder be followed by complete paralysis of the entire limb? It is an injury of the cord, the brachial plexus or is it a simple neuritis?

We have every form of traumatic lesion of nerves with compression, hæmorrhage into, or even rupture, and this may extend to the cord or cerebral centers. From hæmorrhage into the nerve we can get fatty degeneration or degenerative atrophy, or a chronic parenchymatous neuritis.

There is some difficulty in studying the pathological condition in these lesions. Post mortems are rare, and, if made, would seldom be by those competent to make a proper microscopical investigation of the nerves and cord.

I am inclined to consider my two cases a neuritis of the brachial flexus, and the consequent dengenerative atrophy.

The prognosis in traumatic paralysis varies according to the intensity of the nerve lesions. If the nerve is completely divided and nutrition markedly affected, the chronicity of the affection will only increase the dangers. The less the electro-muscular contractility and sensibility have been affected, the sooner will electricity produce good results. The prognosis is favorable if contractility is diminished, but sensation has suffered little or not at all. When all phenonena of contraction and sensation are abolished, the paralyzed muscles will be atrophy, even though they respond to the faradic current. Duchenne says, the return of sensibility and the transformation of anæsthesia into hyperæsthesia constitute favorable signs which are indicative of beginning recovery; the temperature muscular tonicity, and power of voluntary motion will then gradually return to the normal.

With regard to treatment, if the nerves are ruptured they should be sutured. If there is pressure from dislocation, callus or inflammatory thickening, it should be removed. Friction and massage to stimulate circulation. Electrical treatment plays the most important role. The constant current at first, then the induced current. The effect on the peripheral nerves must depend mainly upon its catalytic action, upon its effects on circulation and nutrition, upon inflammation, and its consequences, upon cicatrical tissue, upon cirrhosis and degeneration, the absorption of extravasations and exudations into nerves and nerve sheaths. The faradic treatment is more serviceable and more indicated in old than recent cases. Daily sittings of ten to fifteen minutes. The strength of the current may be gauged approximately by the sensation. The treatment should not be too much prolonged.

The indication for medical treatment will depend on each individual case.

SOME RECENT ADVANCES IN THE TREATMENT OF DISEASES OF THE SKIN. [1]

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The object of this paper is to give a short *resumé* of some recent and important advances that have of late years been made in the treatment of affections of the skin by Dr. Unna, of Hamburg, whose system is fast becoming famous throughout the world. Most of the facts are taken from my own private notes, collected at Dr. Unna's clinic, or from abstracts or translations of articles that have appeared from time to time in the *Monatshefte für Praktische Dermatologie*, or other journals, the reference to which will be given in each instance.

Rather than enter into any abstract questions regarding the actions of topical applications on the cutaneous surface, rather than attempt to explain on theoretical grounds the "keratolytic" or "keratoplastic" reactions that are set up under certain conditions, I would proceed at once to the practical discussions of the various new methods of applying drugs in affections of the skin; and

[1] From the *New Zealand Med. Jour.*

I would discuss the subject under two headings:—

I.—New forms of application in skin diseases.

II.—Those diseases to which these applications are adapted.

I.—New Forms of Application in Skin Diseases.

Since the time of Ferdinand Hebra, no single individual has introduced such extensive reform into the domain of Dermatology as Dr. Unna, of Hamburg. To him we are indebted for much that is new in the histology and in the bacteriology of the skin, and for almost all that is new in the therapeutics of the most extensive sense organ of the body. The improvements that have been made are almost wholly in the direction of topical applications, the chief of which are—(1*a*) Plaster, (*b*) Salve Mulls, (2) Glycogelatines, (3) Pastes, (4) Soaps (over fatty, etc.,) (5) Salve and Paste Pencils.

(1*a*) *Plaster Mulls.*

These elegant topical applications are composed of oleate of alum and gutta-percha, with which drugs in varying strengths are incorporated. The oleate of alum constitutes their adhesive element, and possesses the marked advantage over other such applications in that it is absolutely unirritating. The gutta-percha forms an impermeable basis for the drug incorporation, the whole being spread in a thin layer on fine mull or muslin. Almost any drug may be incorporated with the plaster mass, though varying expedients have to be resorted to in order to ensure satisfactory results. No less than eighty varieties are at present prepared by Beiersdorf, of Hamburg. Those chiefly in use are —Mercury, mercury and carbolic acid, mercury and salicylic acid, mercury and zinc oxide, salicylic acid, salicylic acid and cannabis indica, zinc oxide, lead, boracic acid, chrysarobin, and resorcin.

They are applicable in nearly all localized affections—patchy eczemas, psoriasis, lupus, acne rosacea, and acne vulgaris, etc. Their method of application consists in cutting the plaster to the size of the lesion to be treated, and applying it forthwith. Further details as to their use will be discussed under the individual diseases in the next section.

They possess the following advantages over other methods of local application—they are cleanly, readily applied, are in constant contact with the diseased part; they protect from external irritants, and are comfortable to the patient. They have, therefore, justly come into very general use in the treatment of a large variety of skin diseases.

(*b*) *Salve Mulls.*

These preparations differ from the plaster mulls in that they contain neither gutta-percha nor oleate of alum, but consist simply of an ointment mass, spread very accurately and evenly by machinery on mull, or undressed muslin. Those chiefly in use are—Zinc oxide salve mull, zinc oxide ichthyol salve mull, and lead and carbolic acid salve mull.

There is nothing especially new in this form of application, and Unna[1] only claims for it that it is "a neat, convenient, more adaptable, and therefore more efficacious, form of the strips of cloth coated with ointment, which are used by the school of Hebra." It is not claimed for them that they are to replace ointments altogether, but simply that they are elegant, cleanly, and comfortable applications; especially useful in localized eczemas of hands, feet, face, nostrils, external auditory meatus, &c. The mercurial salve mull is especially recommended in cases of hereditary syphilis—it is cleaner and more easily managed than inunction.

(2) *Glyco-gelatine.*

In recent years, no more useful advance has been made in the treatment of skin diseases than the adoption by Unna of a compound of glycerine and gelatine (glyco-gelatine). Professor Pick, of Prague, was the first who foresaw the utility of these two substances, but he used to apply them separately —a far less convenient method than when in combination. The best basis for the incorporation of all other drugs appears to be the zinc oxide glyco-gelatine,[2] of which there are two forms (A soft, B hard), composed as follows:

A (Soft).

Zinc oxide, ...	15 parts
Gelatine, ...	15 "
Glycerine, ...	25 "
Water, ...	45 "
	100 "

[1] *British Medical Journal*, August 27, 1887.

[2] *Monatshefte fur Prakt. Dermatologie*, 1887, p. 317. Abstract from *Artzler Vereinsblat*, 1886, No. 176.

B (Hard).

Zinc oxide,	10	parts
Gelatine,	30	"
Glycerine,	30	"
Water,	30	"
	—	"
	100	"

Iodide of lead, precipitate, chrysarobin, sulphur, and iodoform, are all miscible in any proportion—5 to 10 per cent. is a suitable proportion for the first three mentioned, 20 to 30 per cent. for the last two. Carbolic acid, salicylic acid, resorcin, naphthol, creosote, and sulphide of potash exercise an inhibitory action on the setting of the gelatine, and should only be incorporated with the Hard variety up to 10 per cent. Fats, balsams, tars, and ichthyol have a diluting and loosening effect, and should be prescribed with the Hard variety, and not in larger proportion than 33 per cent. Substances in powder form may be used, but never in greater quantity than the proportion of gelatine. Camphor and chloral may be incorporated up to 2 per cent., ext. cannabis indica to 5 per cent., hydrarg. perchlor. up to 3 per cent.

The method of application to diseased parts is excessively simple. The solid glycogelatine is melted in a hot water bath. It is then applied with a paint brush to the affected region, and dabbed over immediately afterwards with a roll of absorbent cotton wool; thus a sort of skin is formed, which acts as a protector, and as a medium by which the medicaments may be kept in constant contact with the skin. Besides this, it acts beneficially by its slight compressing effects, producing a localized anæmia, also favoring the absorption of inflammatory products.

Indications for application—

(*a*) Pruritis, both simple and senile, if uncomplicated.

(*b*) Artificial dermatitis, produced by free use of mercurial ointments, alcoholic inunctions, irritation from chrysarobin, salicylic acid, resorcin, &c.

(*c*) Erythema and rhagades, which disappear very quickly.

(*d*) Acute and localized eczema, when not weeping.

(*e*) Pruritic eczemas (the ichthyol 2 per cent., or cannabis indica 5 per cent., zinc glyco-gelatine.)

(*f*) Inflammatory acne. (In some cases a 20 per cent. sulphur, or 5 to 10 per cent. resorcin, zinc gelatine acts admirably.)

Besides the above indications, zinc glycogelatine is very useful as an adjuvant in the treatment of lupus, tinea tonsurans, &c. It is also an excellent fixing agent in the use of the plaster and salve mulls. For efficacy, cleanliness, and comfort, glycogelatines cannot in selected cases be equalled by any other method of topical application.

(3) *Pastes.*[1]

These preparations, though not introduced by Unna, have been largely augmented and elaborated by him.

The conditions which a well-made paste should fulfil are—that it can be easily and rapidly spread over the surface in a thin layer, it must dry rapidly, and leave behind a closely adherent coating.

Bolus alb. (kaolin), starch, dextrin, and gum, each have their advocates as bases in the preparation of the pastes—

Bolus Paste.—R. Boli alb. 2, ol. lini. 1 Misce. Ft. pasta. An excellent foundation. If more ol. lini. be added, a liniment is formed, which leaves a coating on the skin after drying. A good eczema paste is made by adding oxide of zinc and liq. plumbi, thus—R. Boli alb. 3, zinci oxidi 2, ol. lini. 3, liq. plumbi 2. In making the foregoing, the bolus and oil must be mixed before adding the other medicaments, else decomposition will result.

Starch Paste.—R. Amyli 3, glycerini 2, aquæ 15. To be boiled down to 15 parts. To this foundation half or more of their volume of powdered medicament may be added. If, however, more than half the bulk is to be added, then the quantity of glycerine is to be increased in proportion—R. Zinci oxidi 50, acidi salicyl. 2, amyli 15, glycerini 15, aquæ 75. Mix, and boil down to 140 parts; an excellent starch paste in the treatment of eczema.

Dextrin Paste.—The foundation consists of dextrin, glycerine and water in equal proportions. To the foregoing oxide of zinc, &c., may be added as necessary.

Gum Pastes.—The basis consists of one part of mucilage of gum arabic and one part of glycerine, to which two parts of a powder, as oxide of zinc, are added. Carbolic acid, salicylic acid, &c., may be incorporated thus—R. Zinci oxidi 50, acidi carbolici *a* 2 muc. gummi arabici, glycerini *a* 25. Ft. pasta.

Sulphur may be mixed with the starch, dextrin, and gum pastes. Results are not so satisfactory when mixed with bolus paste.

Ichthyol salts are miscible with all the pastes except gum.

[1] *Monatshefte fur Prakt. Dermatologie*, 1884, p. 38.

Tar best in starch, dextrin or gum pastes.

Naphthol, carbolic acid, chloral hydrate, camphor, salicylic acid, sublimate, calomel, red and white precipitate may be mixed with all the varieties.

Iodine, iodoform, chrysarobin, pyragallol, are best suited to the bolus and gum pastes. Fats and soaps may be added to any variety, but only in small quantities.

(4) *Soaps.*[1]

Over-Fatty Soap.—This soap is used as a basis (Grundseife) for the incorporation of all drugs which enter into the formation of the medicated soaps. In its simple non-medicated form, it is an excellent preparation for ordinary toilet purposes, especially adapted for patients whose skins are irritable, or have a tendency to become dry and chapped. It is produced by the addition of two parts of soda and one of potash lye to ordinary beef suet. To this mixture olive oil, about 4 per cent. in excess of that required for saponification, is added, and thus the super-fatty condition is determined.

Over-Fatty Marble Soap.—Consists of super-fatty basis soap, to which 20 per cent. of marble dust is added. Its action on parakeratoses and acne is not medicinal, but simply mechanical.

Ichthyol Soap.—Indicated in rosacea and dry eczemas, is produced by adding 10 per cent. of ichthyol to the over-fatty basis soap.

Salicylate Soap.—Prepared like ichthyol soap, and indicated in subacute and chronic eczemas, in acne vulgaris, and in mycotic affections, tinea tonsurans, &c.

Zinc Soap has a drying action on the skin, and is useful in seborrhœa oleosa, hyberidrosis, and bromidrosis.

Perchloride of mercury, tannate of soda, tar, sulphur, camphor, iodide of potash, and naphthol may all be incorporated with the over-fatty basis soap, and form useful adjuncts to treatment.

(5) *Salve and Paste Sticks.*[2]

These preparations, as their names imply, are composed of two essentially different bases—(*a*) The salve sticks, or pencils, contain fatty elements as the bulk of their ingredients, which are insoluble in water; (*b*) the paste sticks, or pencils, contain non-fatty elements, which are easily dissolved by the aid of moisture.

The first variety (salve sticks) is useful when it is desirable to leave a thin layer of some drug on the fat-covered epidermis of the skin, as in dry eczemas, psoriasis, &c., for ordinary non-fatty solutions would not mix with the oleaginous excretions lying on the surface of the epidermis, hence the medicament could not come into intimate contact with the diseased surface. These pencils are prepared about the thickness of the little finger, and about the consistency of an ordinary cosmetic stick. The latter property is obtained by a judicious combination of olive oil and wax, to which the requisite drug may be added in varying quantities.

If very heavy drugs, as mercury, are to be incorporated, then some suspensory element, such as oil soap, must be added, thus—

Sublimate Salve Pencil (10 per cent.)—Sublimate 10 parts, oil soap 20, pine resin, 5, wax 35, olive oil 30.

The coherence of the mass is materially increased by the addition of ordinary resin, or, if creasote is used, then olibanum resin is best, thus—

Creasote Salve Pencil (10 per cent.)—Creasote 10 parts, olibanum resin 20, olive oil 30, wax 40.

The second variety (paste pencil) is indicated when the epidermis is absent, and there is moisture present to dissolve the elements of the pencil, and no fatty excretion to prevent intimate contact of the medicament with the diseased surface. Thus, these pencils are especially useful in the application of topical remedies to such conditions as chancres (hard or soft), condylomata, ulcers of the mucous membrane of the mouth, nose, conjunctiva, &c.; also in ulcerating or non-ulcerating lupus. In the latter, the sharpened point of the pencil is to be bored into the soft lupus nodule, thus destroying the affected tissue by both mechanical and therapeutic measures, since a coating of the distinctive drug is left in close contact with any diseased tissue that may remain round the walls of the cavity produced by mechanical means.

These pencils consist of short sticks, very brittle, and about the thickness of a slate pencil. They may be sharpened at the point, or not, as necessary. Their basis consists of starch, sugar, dextrin, or gum arabic, and tragacanth, thus—

Iodoform Paste Pencil (40 per cent.)—Iodoform 40 parts, tragacanth 5, starch 10, dextrin 30, white sugar 15.

Cocaine Paste Pencil (5 per cent.)—Cocaine 5 parts, tragacanth 5, starch 35, dextrin 35, white sugar 20.

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[1] *Monatshefte fur Prakt. Dermatologie* (Digest), and Volkmann's "Sammlung Klinischer Vorträge," No. 252.

[2] *Monatshefte fur Prakt. Dermatologie* '86, p. 157.

These preparations, besides being cleanly and convenient when applied by a medical man, are especially adapted for application by patients themselves, who may without inconvenience carry them in their pockets, and apply them at intervals during the day.

II.—The Diseases to which these Applications are Adapted.[1]

Before proceeding to discuss the second part of this subject, *i. e.*, those diseases to which the methods of application described in Part I. are adapted, it will be necessary to briefly explain a term—eczema seborrhoicum—which is now in frequent use in dermatological phraseology, and which originated with Dr. Unna.

Clinically, the condition which, according to Unna,[2] arises from a perverted condition of the sweat glands, which secrete fatty as well as watery products, presents the following characteristics—

(1) "Eczema seborrhoicum almost invariably starts upon the hairy scalp as a latent catarrh, the first traces being the sticking together of the horny layers, sensible exfoliation of scales, abnormal distribution of oily matter, and drying of the hair, through blocking of the mouths of the follicles.

(2) "It has a remarkable predilection for certain positions, which are—Scalp, forehead at junction with hairy scalp, temples, ears, nose, corona around mouth, sternum, axillæ, arms (flexor surfaces), abdomen, chest, back, legs, hands and feet, intertrigo positions, and buttocks.

(3) "It usually spreads from the scalp downwards, over the temples and ears to neck, sternum, axillæ, &c., and assumes one of three forms—(*a*) As a progressive slight scaliness of scalp (pityriasis capitis), with progressive alopecia (alopecia pityroids) scaly form. (*b*) As a progressive baldness, with heaping-up of scales on the scalp, and of a corona seborrhoicum at the junction of the forehead with the hairy scalp, spreading to the temples and ears, or skipping over to regions of the nose and cheeks, particularly apt to occur on the sternum—the crusty form. (*c*) The moist form, in which weeping occurs, is especially apt to attack the temporal regions and ears, the fatty scales are lost, and the part looks red, moist and shining. The lesions most typical of eczema seborrhoicum are—circular or oval red patches of the size of a finger-nail, fading in the centre, the red color of which is masked by a covering of the yellowish crumbling scales. The margin consists of prominent red papules. Groups of such patches or rings form and coalesce with one another, till a festooned figure is formed. It is characteristic of eczema seborrhoicum that it tends to assume certain forms in certain parts of the body, *e. g.*, the scaly form on the scalp and face, the moist in the axillæ, temples, ears, back of hands and fingers, and in intertrigo positions; the crusty form on the trunk. On the palms and soles it resembles psoriasis guttatta, and passes into a peeling condition, but does not weep. The scaly and crusty forms which occur in the beard or moustache are not accompanied by falling out of the hair. On the nose, forehead, and cheeks red papulus, with congestion, may prevail, with pityriasis capitis, and unless cured, passes into acne rosacea. The nails are seldom attacked."

It will thus be seen that many conditions are included under the above name, which were formerly described as varieties of ordinary eczema and psoriasis. With the following exceptions, all cases once so described are now placed by Unna in his class, seborrhoric eczema:—

(1) Eczema papulosum, *i. e.* those cases of eczema in which papules constitute the morbid change in the skin, which with great rarity go on to vesiculation.

(2) Eczema nervosum, which is produced by nervous tension of any sort in neurotic individuals.

(3) Eczema pruriginosum.

(4) Eczema tuberculosum, or scrofulous eczema, which occurs in scrofulous children, is very obstinate, is often accompanied by conjunctivitis, otitis, etc., and generally begins on the face, and extends from above downwards to other parts.

(5) Eczema folliculorum, that form of eczema which appears as grouped papules, affecting the hair follicles.

(6) Psoriasis.—No case is regarded as one of *true* psoriasis, unless the patches appear in typical positions (elbows and knees,) and unless the scales are typically silvery in appearance, without admixture of greasy elements. Many cases which are now recognized as generalized psoriasis, especially of the guttata variety, would thus be excluded, and would be classed as an eczema seborrhoicum.

Treatment.

There is a large class of remedies which

[1] Only the more common diseases have been selected, and it is impossible in a short paper to give more than the bare indications in each case.

[2] "Year Book of Treatment," 1889.

act almost like specifics—resorcin, ichthyol, chrysarobin, pyrogallyl, and sulphur, especially the latter. They be applied as ointments, paste mulls, or sprays.

Unna insists on the condition known as dry seborrhœa of the scalp, or pityriasis capitis, being really an eczema seborrhoicum, having its origin in derangement of the sweat apparatus. He traces the origin of eczema seborrhoicum of the face and body to past or present seborrhœa of the scalp, and thus whenever it exists he treats it very vigorously.

Eczema Seborrhoicum of Scalp (Pityriasis Capitis, Dry Seborrhœa.)

(1) Wash the head every morning with spiritus kalinus of Hebra.

(2) After drying, take an ointment containing sulphur 2 to 3 per cent., resorcin 2 per cent., and apply it very thoroughly to all parts of the head. Apply again at night, and wash it off with spiritus kalinus in the morning. This treatment should be kept up, but with diminishing vigor, for four weeks or more.

If the hair is dark in color, the following is a very excellent application :—R. resorcini 5, ichthyolis 5, acidi salicylici 1, vaselini 88. Ft. unguentum. If the condition is very slight, then a resorcin spray (resorcin 5, spirit 100,) is quite sufficient.

Ears, Neck, and Face.

If non-weeping.—Zinc glyco-gelatine, to which ichthyol 2 per cent. has been added. The gelatine exerts a slight pressure on any œdema present; the ichthyol controls the hyperæmic and inflammatory condition, and relieves itching.

If weeping.—use pasta zinci (Unna's paste) —R. zinci oxidi 10; terra silicæ 10, vaselini 75. Ft. paste, et adde sulphur, 5 per cent.

If crusted.—Having got rid of crusts, apply zinc sulphur salve mull. When the process is very acute, with much itching and burning, watery solutions of resorcin act well— R. resorcini 10, glycerini 10, spiritus 10, aquæ 70. Ft. lotion. To be mixed with water in proportions of five, four, three, two, or one, to one of lotion, according to the acuteness of the condition.

Anterior Nares and External Auditory Meatus.

A very excellent application consists of the yellow or red oxide of mercury salve mull, which is easily applied to the affected surface by making a roll of it, with about an inch projecting from the nares and meatus. The projecting portion is slit into small flaps, which are turned back and held in position by adhesive plaster.

Chronic Eczema Seborrhoicum about the face or extremities is often very satisfactorily treated with resorcin wet dressing,[1] which is applied thus:—A piece of lint is well moistened with a solution of resorcin of the necessary strength, and applied to the affected region; it is covered with an impermeable sheet of gutta-percha and fastened in its place by a bandage. The contained moisture produces swelling of the horny layer, and prevents penetration of the normal fats of the skin, thus rendering it more permeable to the drug. The impermeable covering acts also as a soothing and slight anæmic-producing agent. If this method is unsuccessful, then try resorcin or pyrogallol as an ointment—R. resorcini 5, ichthyolis 5, acidi salicylici 2, vaselini 88. Ft. unguentum—on the scalp and face, and uncovered parts; however, it is advisable to use resorcin without ichthyol, as the latter discolors the hair and the skin. R. Pyrogallolis 5, ichthyolis 5, acidi salicylici 2, vaselini 88. Ft, unguentum.

Chrysarobin is very efficacious, but must never be used on the face, on account of its tendency to produce severe conjunctivitis. Plaster mulls of pyrogallol or resorcin, 1 to 10 per cent., may be used with advantage on small, inveterate spots.

Eczema Seborrhoicum of Scrotum and Anus.

In this position the affection is often excessively rebellious to treatment. Ichthyol asphalt, however, has a very excellent effect on many cases, causing marked subsidence of the inflammatory condition, and a very decided diminution of the accompanying pruritus. If all other remedies fail—resorcin, pyrogallol, tar, ichthyol, etc.,—then resort may be had to Paquelin's cautery. The whole infiltrated surface of skin is seared with a flat blade, especially made for the purpose. The wound may be dressed with iodoform, and when it has healed, may be treated with ordinary remedies, which will probably effect a complete cure. If much intertrigo of scrotum and anus present, the resorcin wet dressing should be used first. If this produces no beneficial effect, paint on a 30 or 40 per cent. solution of ichthyol, and cover it with glyco-gelatine. If there is much moisture about the parts, the gelatine must be dispensed with, as it would undergo solution.

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[1] *Montsehefte fur Prak. Dermotologie*, 1889, p. 44.

Psoriasis.

A very large majority of the cases now designated psoriasis, are called by Unna, eczema seborrhoicum. These cases must be treated according to the directions given when discussing the treatment of that affection. The treatment of true psoriasis differs very little from that at present followed by the majority of dermatologists. The scales are to be got rid of by the use of soft soap and a hot bath; or if there is much infiltration on the patches, the plaques may be removed surgically. Afterwards chrysarobin, pyrogallon, resorcin, or sulphur, must be used freely. Arsenic may be given internally.

Acne Vulgaris.[1]

The pathological process, which culminates in the formation of acne papules, is divided by Unna into two stages—

(1) The blocking of the mouth of the follicle, and comedone formation.

(2) Inoculation with pus cocci, and consequent inflammation and suppuration.

The first part of the process is brought about by an abnormally firm cohesion of the layers of the horny stratum of the skin; this, accompanied by absence of the desquamation, naturally blocks the mouth of the follicle. The duct also becomes blocked by a continuation of the "parakeratosis," thus producing a comedone. The second part of process, *i.e.*, inflammation, occurs only in those ducts that have been inoculated by pus cocci previous to the blocking of the follicle.

The indications for treatment are, therefore, as pointed out by Unna—

(1) To loosen the horny layer of the epidermis.

(2) To kill the pus cocci.

The first indication is fulfilled by the use of strong "keratolytic" remedies—poultices, salves, or pastes, containing green soap—brushing with 5 per cent. liq. potassæ, or acetic acid, or salicylic acid plaster mulls. Sulphur, resorcin, and perchloride of mercury, however, fulfil both indications, as they are keratolytic, as well as antiseptic.

To commence with, patient must wash his face at night with hot water and soap (Hebra's soap spirit, marble or sublimate soap.) He must then apply a paste of sulphur, or resorcin, allowing it to remain on all night, and washing it off in the morning. During the day, a resorcin or sublimate spirit is more conveniently applied—

Resorcin Paste (for nocturnal use)—R. resorcini 10, terræ silicæ 10, ung. zinci benzoate 80.

Sublimate spirit (for daily application)—R. hydrarg. perchloridi 1, glycerini 1.0 aq. aurantii floris 20.0, spiritus 80.0

To prevent relapses, a weak resorcin paste or spirit must be applied for a lengthy period. During the above medicinal treatment, it is important to carry out mechanical treatment, by frequently evacuating the follicles of contents by compression, and by giving exit to pent-up inflammatory products.

Rosacea (Acne Rosacea).[2]

There is no necessary connection between acne and rosacea, though it is true acne is often a complication of rosacea, but the reverse does not hold good. From an extended experience, Unna has come to the conclusion that about 80 per cent. of rosacea cases are associated with eczema seborrhoicum. He therefore separates rosacea into two classes—the one associated eczema seborrhoicum, the other idiopatic, or unassociated with a seborrhoic condition.

The cure of the first variety depends on the successful treatment of the eczema seborrhoicum and pityriasis capitis; whilst that exists, there is always a tendency to return of the disease.

The second variety is best treated by ichthyol, both internally and externally. Internally, in the form of pill, one to two grammes per diem; externally, to be applied as an aqueous solution at night, or better perhaps, the following paste:—R. ung. zinci 20, pulv. oryzæ 4, sulph. 2. Ft. pasta.

In a later stage of the disease, when the vessels become permanently dilated, the parts must be treated with a very marked preparation of resorcin (50 per cent.), which sets up a very strong keratolytic process. After this, the individual vessels must be slit up with a Hebra's lancet, or be cauterized with Unna's modification of Paquelin. If there is much irritation of the face, it must be covered with a glyco-gelatine mask, which also helps to detach the horny layer.

The early and mild form of the third stage, *i.e.*, the stage of connective tissue development, may be treated like the second stage; but if the rhinopymatous development becomes very marked, then there is nothing left in the way of treatment but deep scarification, or ablation. To remove the yellowish stain which is frequently left on the face

[1] *Monatshefte fur Prakt, Dermatologie*, 1888, p. 54.

[2] *Monatshefte fur Prakt. Dermatologie*, 1888, p. 112.

after the disappearance of rosacea, use the following once a day:—R. bismuthi oxychlor. 20, hydrarg. perchlor. 0.1, vaselini 20.

Sycosis.

Two varieties of sycosis are usually recognized—the parasitic and non-parasitic forms—the former being due to inoculation of the hair and hair follicles with trycophyton fungus; the latter, to inoculation with one of the pus-producing cocci; hence the latter is no less parasitic than the former. Unna would therefore substitute the terms hyphogenic (parasitic) and coccogenic (non-parasitic), sycosis.

The diagnosis between these two forms is clearly set forth in all text-books on diseases of the skin. It is not, therefore, necessary to discuss the subject here. Having recognized the variety, it will be necessary to treat it accordingly.

Hyphogenic Sycosis.[1]

(*a*) In the superficial variety, if the beard is not shaved, use an ointment consisting of resorcin 10 per cent., and hydrarg. perchlor. ¼ per cent., to be rubbed in night and morning. If hair is shaved use the following:—R. resorcini 2, hydrarg. perchloridi .05, terræ silicæ 10, ung. zinci 90. Ft. pasta.

In these cases the salve sticks are very useful. Sublimate salve stick, or resorcin salve stick, to be used twice daily. As an adjunct, the resorcin spirit spray is to be recommended—R. resorcini 5 parts, hydrarg. perchloridi .01 to .05, ol. ricini 1.0, aq. cologniensis, spiritus *a* 50. Misce.

(*b*) The deeper nodular variety is best treated with plastêr mulls. The beard must be shaved, then a mull of mercury and carbolic acid is to be applied, and fastened on with zinc glyco-gelatine. Under this treatment, some nodules undergo rapid resolution, others suppurate painlessly, and with but little loss of tissue. Warm fomentations and epilations are valuable adjuncts to the treatment.

Coccogenic Sycosis.[2]

Having shaved the beard, patient must wear a plaster mull of mercury and carbolic acid, or of resorcin, during the day. The suppurating follicles are to be epilated, and touched with a 5 per cent. resorcin spirit. The following drugs may be applied as salves or 2 to 5 per cent. wet dressing at night time—Resorcin pyrogallol, chrysarobin, sulphur, or ichthyol; the latter is especially useful as a 10 per cent. wet dressing.

If patient objects to shaving, the superficial follicles must be regularly epilated, and then smeared with a salve of oxide of zinc and sulphur, or resorcin and sublimate. Scarification is not to be recommended, as it leads to fresh inoculation of cocci. Epilation is to be practiced on the follicles which are affected superficially, in order to allow of their more easy disinfection with antiseptics. When the affection is cured, fresh outbreaks must be guarded against by the destruction of newly arising postules by epilation, and cauterization with a pointed sublimate paste pencil, and by subsequent use of weak resorcin or sublimate applications.

Lichen Planus.

The remedy which exercises the most beneficial effects on this troublesome form of skin disease, is the perchloride of mercury. It may be applied in various ways. The following ointment, with which carbolic acid is incorporated, acts very effectively, dispersing the papules, and controlling the pruritus, which occasionally is almost intolerable:—R. hydrarg. perchloridi 1, acidi carbolici 20, vaselini 80. Ft. unguentum.

A good method is to apply the perchloride in collodion and spirit, which is to be brushed over each individual papule at first daily, and then three timez a week—R. collodion 20, spiritus 20, hydrarg. perchloridi 2.

The administration of arsenic forms also an important part of the treatment of lichen planus.

Lupus Vulgaris.[3]

The treatment of this aection has for itsff object the total destruction of the tubercular lesions which are situated in the cutis vera. With this object the curette or Paquelin's cautery must be freely used. The latter is preferred by Unna, since the micro-organism of the disease is less likely to develop afresh in the tissue that is wholly destroyed by the cautery, than it is in the raw surfaces left by the sharp curette. Also, a firmer cicatrix is produced by the cautery.

Having then, whilst the patient is under chloroform, thoroughly destroyed all the nodules of lupus tissue, the raw surface must be rendered quite aseptic by application of the following:—R. spiritus ætheris 80, acidi carbolici 16, hydrarg. perchloridi 4. The next step is the application of salicylic, creasote, or salicylic quaiacol plaster mull, whilst the patient is still under chloroform. The plaster

[1] *Monatshefte fur Prakt. Dermatologie*, 1888, p. 345.

[2] *Monatshefte fur Prakt. Dermatologie* 1888, p. 555.

[3] *Monatshefte fur Prak. Dermatologie*, 1889, p. 337

is to be cut a shade larger than the affected surface, and to be fixed in its place by zinc glyco-gelatine.

The plaster mull must be renewed every day; but before replacing the new one, the raw surface must be cocainized, and any nodules of lupus tissue that can be found undestroyed by the cautery, must be bored out with a sharp-pointed sublimate paste pencil (10 per cent.) The sublimate pencil is then smeared freely over the whole surface, and the new plaster mull is adapted as at the first dressing. If the salicylic plaster mull is not obtainable, the following, spread on a double layer of gauze, may be substituted—R. acidi salicylici 20, creasote 40, cerati 40. Ft. pasta.—*Australian Medical Journal.*

Selected Formulæ.

PISTOIA POWDER.

There is a powder made in a convent near Pistoia, Italy, and it is used very extensively as a protective against gout. The following is said by Mr. Chastaing to be its composition:

℞ Bryonia root,
Gentian,
Chamomile, aa.....grammes x.
Colchicum root..... " xx.
Betony..... " l.

This is made into 365 powders, one of which is taken each day of the year in a full glass of cold or hot water.—*Medical Record.*

SANTAL OIL FOR COUGH.

Curtin (*Philada. Hosp. Rep.*) finds that sandal wood oil often gives relief to the cough in phthisis, catarrhal pneumonia, chronic bronchitis, with asthma and influenza. It is given on sugar or floated on water.

TREATMENT OF CONDYLOMATA.

Dr. G. Finco (*Gazetta Medica Lombarda*) recommends the following in the treatment of condylomata:

℞ Collodion.....grammes 2.00.
Mercur corrosiv..... " 0.02.

The collodion should be poured into a small cup, the corrosive sublimate added, and the whole well shaken, as the sublimate does not dissolve in collodion.

The largest condylomata may be touched with a small brush dipped into the mixture following this with the local application of cold water. On the following days the others may be treated until all are removed.

THE CLINICAL VALUE OF THE DIAZO-REACTION.

The following solutions are necessary to make the diazoreaction:

A.

℞ Sulphanile acid.....gtt. lxxv.
Muriatic acid.....f℥ss.
Distilled water.....f℥xxx.

B.

℞ Nitrite of sodium.....gr. viij.
Water.....f℥iij.

When ready for use 75 drops of solution *B* are to be added to 8 ounces of solution *A*, and this reagent should be prepared fresh for every test. Then to equal parts of the reagent and urine, ⅓ volume of ammonia is added, and shaken up. In certain febrile diseases the fluid turns red, which is especially noticeable in the foam. This reaction is observed in typhoid fever, as well as in severe cases of phthisis, pneumonia and measles. Dr. Victor Grosstern (*Gazeta tekarskb*) formulates the following conclusions derived from this reaction in pulmonary tuberculosis and typhoid fever: 1. In pulmonary tuberculosis the intensity of the reaction is an index to the severity of the affection, and always means an unfavorable prognosis. 2. The reaction is always present in miliary tuberculosis. 3. The diazoreaction taken in connection with splenic enlargement and the roseolar eruption is one of the earliest symptoms of typhoid fever. 4. The diazoreaction is never present in febrile intestinal catarrh. 5. The course of the fever and the various methods of treatment have no influence on the reaction in typhoid fever. 6. The disappearance of the reaction in the second and third week of the disease indicates an early crisis; whereas, if the reaction persists, the typhoid fever will be long continued and severe. 7. Relapses are attended with a recurrence of the reaction.—*Wiener med. Presse,* April 19, 1891.

OPIUM SMOKING IN PHTHISIS.

Dill (*Lancet*) has obtained great improvement in several cases of phthisis by giving the patient tobacco to smoke which has been steeped in a solution of opium. In no case were any bad effects from the opium noticed.

FORMULÆ FOR GOUT.

The following (*Hygiea,* No. 3, 1891) is recommended as a local application in gout:

℞ Collodii.....grammes 5.
Æther sulphur..... " 5.
Acid salicyl..... " 4.
Morph. sulph.....gramme 1.

M. S. Apply locally with a camel's-hair brush every hour.

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LEADING ARTICLE.

MASSAGE IN SURGERY.

Massage has undergone serious and conscientious trials and has apparently been equal to the test in the various domains of the healing art. Unlike hypnotism, the elixir of Brown-Sequard, the ill-fated treatment of Koch, etc., massage has not revolutionized the ideas of that profession which is ever eager to grasp whatever serves to cure or even alleviate human suffering, although probably more real benefit has been derived from this simple manual procedure than from the more pretentious remedies mentioned.

While massage should not be looked upon as the great panacea of the modern practice of physic, nor does it pretend to be, there is sufficient clinical evidence to show that it has produced gratifying results in the treatment of medical, surgical and gynæcological cases. Of late, it has been largely used in surgery, and many are the reported instances in which even permanent good has been obtained.

In reviewing this subject, Gilles asserts that massage has effected cures in cases of articular disease, in lumbago, in luxations, syphilitic and blenorrhagic arthritis, in acute and chronic epididymitis, in acute and chronic myositis, torticolis, muscular contractions, muscular atrophy, and muscular paralysis. We can easily understand how in many of these cases massage was effective. For instance, the active and passive movements of muscular massage act favorably on arthritis, and the continuous treatment of this affection, would undoubtedly tend to arrest the invading progress of atrophy. The same may be said of muscular contractions and paralysis. In other instances of a similar nature, suspension, which may be looked upon as an indirect massage, was applied. It seemed to give the best results. Be this as it may, this procedure is a violent one and should be modified. But we cannot yet understand, much less explain, how massage can act favorably, as reported, in cases of infectious diseases of the joints, such, for example, as syphilitic and blenorrhagic arthritis.

In this connection we may refer to a research of J. R. Kappeler, (*Fort. der Med.* Apr. 1, 1890.) This investigator has endeavored to determine whether through massage, pathogenic micro-organisms can be removed by means of the lymphatic glands from the seat of infection, and whether such removal could be effected before any specific action of the bacteria became manifested at the seat of inoculation. It was likewise the object of the experimenter to determine whether the organisms thus treated perished or still retained their specific properties. The experiments were made with the *staphylococcus aureus*,of which an artificial pure culture was employed. The seat of inoculation was the knee-joints of rabbits. After the injection the joint was rubbed for seven minutes, the operation being repeated after half an hour. It was afterwards continued for several days, twice daily, and for fully ten minutes during each operation. After many careful experiments the observer found that both joints in which were and in those which were not rubbed, an effusion of pus occurred,by the fourth day, and continued to increase slightly for a day or two and then stopped. The pus was yellow and creamy and contained the *staphylococcus* which retained its vitality and specific power even when left in the joint for a period of a hundred and twenty days. Severe diarrhœa in all cases, and pneumonia in a few instances, occurred. No disease was found in the long bones or other joints in any of the animals experimented upon. In many of them, however, secondary abscesses of the kidney and liver were observed conjointly, and the *staphylococcus* could be cultivated from the pus of the joint subjected to massage as well as from that which had been left at rest.

These and other results, all of which were of a negative character, simply appear to show that massage alone is incapable of removing a specific pyogenic germ (staphylococcus pyogenes paureus) from the knee-joint by means of the lymphatic vessels.

It is true that in such cases as these massage appears to exercise no serious deleterious influence; but it cannot be inferred from this that the process would be harmless if applied to more vascular seats of inoculation. It is, however, probable that the removal of bacteria might be hastened by massage in places where the effusion of leucocytes might not be sufficient to block the lymphatic vessels.

Notwithstanding the above facts, massage has produced gratifying results in the treatment of a variety of surgical cases, and we cannot but admit its undoubted usefulness in many instances especially where other measures have entirely failed. Thus Douglas Graham (*St. Louis Medical and Surgical Journal*, July, 1890) who has made a critical study of massage in surgery, and who has published some interesting statistics, asserts that cases of sprains got well in one-third the time under massage than without it, and with less tendency to subsequent pain, weakness and stiffness. Many French surgeons, notably Championierre and Rafin, have treated fractures by means of massage, and usually with the best results. In such cases the movements promoted the absorption of effused products, prevented the stiffness of joints, and the atrophy of muscles, and generally hastened the repair of tissues. Rafin has seen recovery take place in 13, 22 and 12 days respectively, in three cases of fracture of the fibula; in two of fracture of the radius in 19 and 20 days; in a double fracture of the ulna in 27; in a fracture of the external condyle of the humerus of a child, in 9 days; in a fracture of both malleoli in a child, in 15 days; in another fracture of both malleoli, with subluxation of foot outwards and backwards, in an adult, in 40 days. Recoveries from transverse fractures of the patella have been observed by Tilanus of Amsterdam, under massage and early movements of the joints. Six patients treated by this author, could walk very well in the course of fourteen days. The same results were obtained in five cases of the same nature, according to Wagner of the Austrian Army, and in which even the application of bandages was dispensed with. In all these latter cases, the effusion being quickly dispelled, both atrophy and stiffness

were prevented. Three cases of relaxation of ligaments in which the most excellent effects were produced by massage are reported by Graham himself. In all of them the paralyzed muscles, from want of use, and which were unable to extend the affected leg at all, could, in a few weeks, hold it fully and voluntarily for seven, nine and ten minutes respectively. The first case was one of a lady who had the remains of an old synovitis. The second was that of a man, 63 years of age, with a rheumatismal arthritis of the left knee which had developed as a result of an injury. The third case was that of a woman suffering from relaxation of the quadriceps extensor, which allowed the patella to slip externally without power, voluntary or involuntary, of replacement.

If all these results be correct as reported, certainly massage is a remedial measure of no inferior value in surgical practice; but here, more so than in the treatment of medical cases, extreme care should be exercised in its application, lest the doors of a sacred sanctuary be opened to a reckless and evil-producing charlatanism.

PERISCOPE.

THERAPEUTICS.

ON RESCUING DROWNING PERSONS.

The following directions to swimmers for rescuing drowning persons are given by Herr Tetens, President of the Seaman's Society in Hamburg:

1. When you approach a drowning person, call to him in a loud voice that he shall be saved.

2. Before springing into the water, undress as completely and as rapidly as possible. Tear the clothes off if necessary; at any rate, loosen the drawers below if they are bound about the ankles, else they fill with water and hold back the swimmer.

3. Do not touch the drowning person so long as he still struggles strongly in the water; wait a few seconds until he becomes quiet. It is foolhardiness to touch any one while he struggles with the waves, and he who does this subjects himself to much danger.

4. When the unfortunate is still, seize him by the hair of the head; throw him as quickly as possible upon his back, and give him a push to hold him up. Then throw yourself upon your own back and swim thus for land, meanwhile holding with both hands the drowning person by the hair—of course with face upward and his head resting upon your own body. In this way one reaches land more quickly and surely, and a skilful swimmer may even keep two or three persons above water. A great advantage of this expedient is that the rescuer is in the most favorable position for keeping his own head as well as that of the unfortunate above water. One can also remain in this position a long while, which is of importance when obliged to wait for a boat.

5. The "death-grip," practically, is a thing of rare occurrence. As soon as a person becomes weak and begins to lose his senses, his grip becomes weaker, and his hand at last completely loses its hold. He, therefore, who has an idea of saving a person by swimming, need have no fear of the "death-grip."

6. If the person has sunk before he could be reached, the location of the body will be very accurately indicated by the bubbles which rise to the surface now and then. In flowing water which prevents the perpendicular rising of bubbles, allowance must of course be made for the direction and the rapidity of the current.

7. In diving after a body, it should be seized by the hair with only one hand, while the other hand and the feet are used in regaining the surface.

8. In salt water when the current sets from the land, as when the tide is going out, it is a mistake to struggle to reach land. One should rather throw himself upon his back, whether alone or encumbered, and await help from the shore. Many persons perish by exhausting themselves in vain attempts at swimming against the current, when they might have thrown themselves upon their back and awaited help from shore.

9. These rules are applicable in all cases, whether in still water or in the roughest sea.—*Schweiz. Blatter f. Gesundh.*

VACCINATION IN WHOOPING-COUGH.

Dr. Cachoza (*Norsk Magazin for Lægevidenskab*, No. 5, 1891), after an accidental observation of improvement in a child with whooping-cough after vaccination, vaccinated five children, of which four were very severely attacked, having spasms, vomiting

and hæmorrhages from the nose and mouth. After vaccination and the consequent fever the scene was entirely altered; the cough ceased to be spasmodic and entirely disappeared after eight or ten days. Inhalations of a 1 per cent. carbolic acid solution completed the treatment necessary.

AVOIDANCE OF STIMULANTS DURING HÆMORRHAGE.

It is customary, when the accident of hæmorrhage occurs, for the operator, or some by-stander, to administer wine, brandy, or some other alcoholic stimulant to the patient, under the false idea of sustaining the vital power. It is my solemn duty to protest against this practice on the strictest and purest scientific grounds. The action of alcohol, under such circumstances, is injurious all around. It excites the patient, and renders him or her nervous and restless. It relaxes the arteries, and favors the escape of blood through the divided structures. Entering the circulation in a diluted state, it acts after the manner of a salt in destroying the coagulating quality of the blood; and, above all other mischiefs, it increases the action of the heart, stimulating it to throw out more blood through the divided vessels. These are all serious mischiefs, but the last named is the worst. In hæmorrhage the very key-stone of success lies so much in quietness of the circulation that actual failure of the heart, up to faintness, is an advantage, for it brings the blood at the bleeding-point to a standstill, enables it to clot firmly, when it has that tendency, and forms the most effective possible check upon the flow from the vessels. Dr. Richardson (*Asclepiad*, No. 29, 1891), refers to a case in which three pounds of blood was lost and the patient was unconscious, but which recovered. He refers to this as typical, because, if a stimulant were not wanted in it, a stimulant cannot be called for in examples less severe. The course followed was simply to lay the patient quite recumbent when signs of faintness supervened, and, so long as he could swallow, to feed him with warm milk and water freely. Such, in my opinion, is the proper treatment to be employed in every instance of syncope from loss of blood.—*Dietetic Gazette*, June, 1891.

BROMOFORM AS A TOPICAL APPLICATION.

Dr. Solomon Solis-Cohen, writes in the *News*: I have recently employed bromoform in a severe case of ozœna as a topical application to the nasal mucous membrane after thorough cleansing with hydrogen dioxide. The absence of the severe local reaction anticipated, together with the extraordinary success of the measure, not only in destroying the odor but in controlling the morbid secretion, encourged me, after preliminary trial upon my tongue and pharynx, to use the same agent as a topical application to tuberculous and other ulcers of the larynx, after cleansing with hydrogen dioxide. Here the agent seemed to exert analgesic as well as disinfectant properties, as pain was relieved and healing apparently promoted. The agent being extremely volatile, the immediate effect is transient, and I have, therefore, followed the application of bromoform with insufflation of iodoform in powder. While this somewhat obscures the therapy, yet the effect was better than when iodoform had been used without bromoform in the same cases. This preliminary note is published at this time to induce further trial and report by others.

THE GOOD RESULTS OF MASSAGE.

Dr. Agostini (*Archivio di Orlopedio*) presents the statistics of 417 cases observed during the last six years, both in private and hospital practice. He thinks that massage should only be employed by the physician, and cites a case where the brutal manipulation of an inexperienced masseur produced serious disorders. His material consisted of the following traumatic lesions: 41 cases of dislocations of the tibio-tarsal joint, 12 of the radio-carpal, 6 of the elbow, 3 of the knee, 15 cases of contusions, 12 cases of rupture and laceration of muscles, 9 of fractures and 5 of luxations. He has also treated 74 cases of severe inflammation of the joints and the resulting articular degenerations, with rapid and complete recovery. Articular and muscular rheumatism were also relieved. —*Revue d' Hygiéne Thérapeutique*, January, 1891.

PHYSIOLOGICAL EFFECT OF BATHS IN TYPHOID FEVER.

"Dr. Kurkutoff, who has examined the physiological effects of the baths administered to typhoid fever patients in Professor Manassein's clinic in St. Petersburg, finds that such baths exert only a slight effect on the assimilation of the fatty constituents of foods, which, as in other fevers, is notably less than in healthy persons, and indeed varies directly with the gravity of the case; but there seems to be a good deal of differ-

ence as to the power of assimilation of fatty matter in different cases, probably depending on the functional disturbance in the bowel and on the amount of the individual peculiarities of the patient. In the graver cases the effect of the baths was to improve somewhat the assimilation of fat to the average extent of nearly four per cent. In slight cases, however, the effect was, apparently at least, to diminish the assimilation to the average extent of rather more than six per cent."—*Lancet.*

A PRACTICABLE AND PAINLESS METHOD OF USING IODINE HYPODERMICALLY.

In the *Medical News* of April 14, 1891, Dr. E. Fletcher Ingals, discussing the Shurly-Gibbes treatment of pulmonary tuberculosis, says: "It is usually best, excepting in advanced cases, to begin with iodine, though it is apt to cause considerable smarting," etc. In the *Therapeutic Gazette* for April, 1891, Drs. Shurly and Gibbes say: "The iodine solution gives considerable pain to some people, to others very little; but the gold solution gives little or none. We hope that a solution can be made with lanolin, or something of that sort, which will obviate this objection in the case of iodine."

Having found the use of the iodine solution exceedingly painful, in one case so severe as to lead to the conclusion that if its use was persisted in, local anæsthesia, by means of spray or other more or less inconvenient method, must be resorted to, I found that the injection could be rendered absolutely painless by incorporating with the mixture as used by Drs. Shurly and Gibbes, a small quantity of creasote, or better, guaiacol. Another objection to the solution as prepared by Drs. Shurly and Gibbes is the large *quantity* necessary to be injected when it is desired to administer the full dose of one-half grain of iodine. This requires that sixty minims be introduced beneath the skin, and since the hypodermatic syringe, as usually made, has a capacity of but thirty minims, either the barrel must be unscrewed and refilled, the needle meanwhile being left sticking in the skin, or if the needle is withdrawn a second puncture must be made, all requiring time and causing additional pain. This might be avoided by increasing the strength of the solution, which, I infer, has been found impracticable, because of increased pain or other reasons. The object can be attained by incorporating iodoform in the solution to be used, and thus combined, the anæsthetic effect of the guaiacol is increased and prolonged. The formula that I have adopted after a number of trials as most eligible is as follows:

℞ Eucalyptol, pure.....ℳ xxxij.
Guaiacol, pure.....ℳ xvj.
Iodoform.....gr. viij.
Iodine.....gr. jv.
Ol. amygdal. dulc. (sterilized) q.s. ad. f℥j.
Sig. For hypodermatic use · 10 to 30 minims daily or alternating with gold and sodium solution, as desired.

The anæsthetic properties of this solution are such that patients prefer its use to that of the gold solution, although the latter is nearly painless. Larger doses of the guaiacol and eucalyptol than are contained in the thirty minims of the above solution have, in my hands, caused excessive and exhausting sweating, with no proportionate benefit. The amount of iodine in this formula is the same as that contained in the Shurly-Gibbes solution, with, as will be seen, double that quantity of iodoform. Therefore the dose may be but one-third to one-half of that of the Shurly-Gibbes solution.—Dr. A. O. Squier, in *Med. News.*

THE TREATMENT OF VARIOUS TOXIC AMBLYOPIÆ.

1. *Alcoholic Amblyopia:*—Complete abstinence from alcoholic drinks. Aid nutrition by administration of tonics and healthy foods; calm cerebral excitement by a course of bromides. Locally, by instillation of eserine or of pilocarpine the existing mydriasis can be overcome. Recourse should be had to hypodermatic injections of strychnia, the galvanic battery, hydrotherapy and to ocular douches.

2. *Tobacco Amblyopia:*—Moderate use of tobacco. According to Sichel and Mackensie, the smoking of fifteen to twenty grammes (about half an ounce) of tobacco per day is a toxic dose; never smoke but two-thirds of a cigar, as the last third is a reservoir for nicotine. The preceding is prophylaxis. If amblyopia exists, use of tobacco must be prohibited. Stimulate nutrition, give inhalations of nitrite of amyl, injections of strychnia, constant current of electricity and ocular douches.

3. *Saturnine Amblyopia:*—The treatment is that for saturnism: purgatives, sulphur baths, iodide of potassium in large doses, and tonic regime.

4. *Quinine Amblyopia:*—The elimination of the drug is facilitated by giving purgatives and diuretics; use also inhalations of nitrate of amyl, injections of strychnia and electricity.

5. *Amblyopia from Antipyrine:*—The author cites numerous cases of amblyopia

associated with ischæmia of the retina following the use of large doses (four to seven grammes) of antipyrine taken through a period of several weeks. Discontinuance of the use of the drug restored vision at the end of about ten days.

6. *Amblyopia from the Fumes of Carbon Disulphide:*—The patient will have to abandon his occupation as one of the first requisites to recovery. The use of tonics, iron and quinine, a substantial diet, subcutaneous injections of strychnia, inhalations of nitrate of amyl, and galvanic electricity will all aid toward effecting a cure. As a means of prevention, prohibit the manufacture in rooms; ventilate perfectly; hermetically seal containers; observe great cleanliness on the part of workmen; they should change their clothes on leaving the factory. —*L'Union Médicale du Canada.*

BORAX IN EPILEPSY.

Dr. Dijoud has tried this remedy in twenty-five cases, and he claims to have entirely cured one, and to have relieved all except six. The duration of the treatment varied from one to seven months, and he was able without inconvenience to carry the dose up to ninety grains a day. This was only possible if a beginning were made with small doses, which were gradually increased; and when the dose exceeded sixty grains daily he found it advisable to add some glycerine to the water and syrup in which the drug was usually administered. It should also be mentioned that the patients to whom Dr. Dijoud administered borax had been treated unsuccessfully with the bromides, and there seems now to be little doubt that in certain cases of epilepsy, borax is of very considerable use. It is desirable that particulars should be furnished of the time that elapsed between the cessation of the treatment by bromides and the inauguration of that by borax, as it is well known that epileptics who have been treated with bromides often improve much in their condition after the drug has been left off; and it is necessary to distinguish this improvement, which at least occasionally occurs, from that which may be due to the administration of a fresh remedy. —*Lancet.*

ANTIPYRIN AND ANTIFEBRIN IN POLYURIA.

In the *Meditzinskoïe Obozrenië*, No. 5, 1890, p. 487, Dr. I. I. Maslovsky, of Bürnak, draws attention to antipyrin and antifebrin as remedies for diabetes insipidus, and adduces an interesting illustrative case referring to a sickly and highly nervous peasant-lad, sixteen years old, with polyuria of a nervous origin and of six years' standing, in which the use of these drugs was followed by a striking and apparently permanent decrease of both thirst and amount of urine. Antipyrin was administered at first in eight-grain doses four times daily; later twelve grains five times a day; then finally twenty-four and twenty-six grains four times daily, the whole course lasting thirteen days. The daily quantity of urine fell from 11.700 cubic centimeters to 6.100; that of water ingested from 10.600 to c. c. to 6.200. After an interval of three days, antifebrin was resorted to in from six to eight-grain doses four times daily, for eight days. The daily quantity of urine decreased from 6.300 c. c. to 4.100; that of water ingested from 7.450 to 4.590. No unpleasant effects were ever noticed from either of the remedies.

MEDICINE.

ELIMINATION AND ITS USES IN PREVENTING AND CURING DISEASE.

The above was the title of the Cavendish Lecture, delivered June 12th, by Dr. T. Lauder Brunton. Particular emphasis was placed on the importance of free elimination by the bowels. Not only the brain, but the heart, lungs, liver, stomach and kidneys have their functions impaired when the bowels cease to do their duty. Napoleon's disaster at the battle of Leipzig is popularly set down to his having eaten a bun in a hurry, and so brought on dyspepsia; but it would be a very curious page of history if we could learn how many wars, how much bloodshed, and how much cruelty have had their origin in imperfect action of the bowels. Washington Irving, in his "Lives of the Caliphs," tells of a certain emir named Al Hejagi, who suffered for many years from dyspepsia and abdominal pains, and this wretched man distinguished himself, perhaps above all other rulers who ever lived, in the enormous number of people whom he sentenced to imprisonment and death. He is said to have caused the death of no less than 120,000 persons, besides those who fell in battle, and to have left 50,000 in prison when he died himself. How much of all this misery might have been averted by the judicious use of mild aperients, it is as impossible for any one now

to tell, as it is to estimate the debt of gratitude which Europe owes to the physician of Louis XIV for the care he took of the bowels of that august monarch.

In mitral disease and in dropsy, either cardiac or renal, the benefit derived from the free use of the compound jalap powder is very great; and in his work on "Purgative Medicines," Dr. Hamilton describes most forcibly the advantages he obtained from purgatives employed in such a way as merely to clear the bowels, not to produce violent purging, in typhus fever, malaria, scarlet fever, hysteria, chorea and tetanus.

Most persons can regulate their bowels by exercise and diet, but these sometimes fail, and we must have recourse to so-called aperients. The dinner-pill supplies a very useful stimulus, and Dr. Brunton knows a man who has taken one every day of his life for forty years, apparently with great benefit to himself. But there are some people who do not seem to thrive on dinner-pills, and they either do not get any action at all, or they get too much. In such cases, instead of giving the intestines one great push once a day by the dinner-pill, one may give them a series of gentle jogs by adding to each meal a minute quantity of a purgative; and Dr. Brunton has found that one-tenth of a grain of aloin given with each meal sometimes succeeds when other means fail, and even these minute doses sometimes seem to be too much.

But many persons, besides the dinner-pill, require a weekly clear-out; and if this be not given to them by means of a cholagogue purgative, they have a regular sweep-out once a month by getting a violent migrane with bilious vomiting; and generally they are obliged to fast for at least one day during the continuance of the headache. The effect of a cholagogue purgative such as a mild mercurial, followed by some saline, is sometimes very remarkable. Dr. Brunton has seen a quarter of a grain of calomel, with a Seidlitz powder next morning, surprisingly change the temper of a sulky boy or girl; and he has more than once taken the "naughtiness" out of a peevish child by a dose of Gregory powder, which, being nasty to the taste, has both a moral effect and a physical action.

Not infrequently adults suffer from nervous irritability, depression, weakness, and inability to do anything; and this is often put down to neurasthenia and hypochondriasis. They are treated with nervine tonics and sedatives, change of scene, baths, etc., to little purpose; nervous and depressed they still remain. In some of these cases, we may notice a large amount of mucus in the motions, and sometimes there appear to be actual casts of the intestines, long, membraneous-looking shreds, apparently tubular in their character. This condition has been described by Dr. James Simpson, under the name of "membranous enceritis"; and it is not usually said to be associated with hypochondriasis, but often it is looked upon as a consequence rather than the cause of the nervous condition which is its usual concomitant. But it is no use here to treat the nerves. If you wish for any good result, you must treat the bowels. In some, probably many cases, conditions depend upon partial constriction of the intestine near the junction of the sigmoid flexure with the rectum. The motions, lodging here, cause an inflammatory condition of the mucous membrane and profuse secretion of mucus, which either simply coats the fæcal matter, or forms a kind of false membrane. In adults, prolapse of the sigmoid flexure into the rectum may give rise to great nervous disturbance lasting for years, unless its existence be suspected and the proper treatment adopted. One useful remedy is the injection of two to four ounces of cold water immediately after a motion. This is to be retained, and has the tonic effect of a cold bath on the intestine, increasing the contractile power and lessening the tendency to prolapse. In all cases of this kind the regular use of suitable laxatives should be enjoined.

Dr. Brunton, in the same lecture, urges the importance of maintaining a healthy state of the renal function, and speaks of the benefit in gouty and rheumatic cases, and in bilious colic, of making patients drink a big tumber of water, and especially hot water, every morning, with or without some Carlsbad salts added to it, and, if necessary, repeating the hot water once or twice in the day.—*Boston Med. Surg. Jour.*

THE NERVES OF THE CORNEA.

Dr. A. C. Dogel, has examined eyes which had been taken from the body from five to seventeen hours after death. The result of these examinations, as published in a Russian opthalmic review, was that he found the cornea provided with from sixty to eighty small nerve branches, some with and some without medulla, of which from twenty to thirty go to the posterior corneal surface, and from forty to fifty to the anterior. In these nerves a central filament and a peripheral axis cylinder substance may be distinguished.

The central filament resolves itself into single nerve fibrillæ. Within the corneal parenchyma the nerves and their branches form a primary plexus. This primary plexus gives out secondary branches, called "rami perforantes," which form the sub-epithelial plexus, and this again gives rise to still finer ramifications forming an intra-epithelial plexus. The same nerve branch generally shares with its branches of the second order in the formation of all these plexuses. The nerve terminations in the epithelium are bulb-shaped, and form ganglions. An especial thickness and zigzag course distinguish those filament which go to the stroma of the cornea. These also form a plexus. Each layer of the cornea has a separate plexus except the membrane of Descemet and the next layer, which have no nerve plexus. The author believes, in opposition to Kuehne and Waldeyer, that the nerves of the cornea have no sort of connection with its cells and corpuscles, but are merely situated between them.—*Lancet.*

A NEW POINT—NOTE ON THE VIRILE REFLEX.

Dr. C. H. Hughes says in the *Alienist and Neurologist*: If you take a perfectly healthy individual, whose spinal cord is entirely normal, especially in its genito-spinal center, and place him on a couch without head-rest, supine and nude about the loins, and make the sheath of the penis tense by clasping the foreskin with the left index finger and thumb at about the place of the frænum, and pulling it firmly towards the umbilicus, placing the middle, ring and little finger low down upon the dorsum of the virile organ, for perceptive purposes, and then sharply percuss the dorsum or sides of the penis, near the perineal extremity, a quick and very sensible reflex motor response or retraction of the bulbocavernous portion will be felt to result from this sudden percussional impression, like that which follows, though less pronounced, in the testicles, after sensory irritation of the inner aspect of the thighs, and known as the cremasteric reflex. The reflex jerk is away from the irritating impulse, though it is down towards the perinæum in the penis reflex, while it is upwards in both the cremasteric and patellar tendon phenomena. I have not seen this phenomenon described before.

This reflex symptom is of important clinical and physiological significance. Its full value for diagnostic and prognostic purposes has yet to be determined by further investigation than I have given it. But I have learned enough to confidently commend it to neurological clinicians.

I have called it the virile reflex, because it seems to be actively present in all healthy adult males with normal spinal cords, whom I have examined, and absent in infants, and feeble or absent in male children who have not attained the age of puberty. A number of years ago I ventured the assertion that the absence of the cremasterick reflex would be found of significance in the determination of impaired virility from sexual excess and masturbation. This subsequent experience has only been confirmed. Now this new sign—the penis percussion reflex—present, impaired or absent, gives us another valuable evidence of the vigor, impairment, loss or abeyance of the sexual powers in man.

After prolonged excessive venery it becomes impaired or disappears,to return again with sexual recuperation.

After excessive masturbation, long continued, with accompanying neurasthenia, I have found it impaired, but seldom entirely absent in young subjects. It is not impaired in masturbation when the habit has not destroyed the sexual power. It disappears in some cases of chronic meconism, and becomes abeyant in long and beastly intoxication, though often excitable in acute alcoholism. This subject needs further investigation.

It is lowered and abeyant in the later stages of typhoid fever, and I have found it also in the moribund state. I have found it absent in old men who have acknowledged and sought treatment for entire virile incapacity.

It is often, but by no means uniformly, found in sympathy with the other reflexes in spinal cord disease of the lumbo-dorsal spine as the quadriceps extensor femoris tendon reflex, the anal, vesical and cremasteric reflex, the Achilles reflex and ankle clonus.

A kind of erector penis clonus, characterized by a succession of jerks, continuing after the percussion or while the foreskin is kept stretched, much like the characteristic ankle clonus, having been elicited in one case of transverse dorsal spinal myelitis with double ankle clonus only to fade away as the ankle clonus disappeared. I found it absent in another case.

This phenomenon may also be elicited by suddenly jerking the foreskin after it has been made tense, or by pinching the theca of the penis when it is in this stretched condition. This reflex may be reinforced like the knee phenomenon. Electrical excitation will also

evoke it. A clonus may sometimes be elicited in this way.

Some skill in palpation—a sort of *tactus eruditus* is necessary in examining for this sign, the characteristic jerking back of the bulbous urethra within the sheath of the penis being felt only when carefully sought for. It is not ordinarily to be seen.

This sign does not always sympathize with the other reflexes in spinal column or cord disease. I have lately found the sign absent in the case of a married man, aged 45, sent me by Dr. Charles Barck, the accomplished opthalmologist of the Marion-Sims Medical College, who diagnosed white atrophy of the retina. This man has also unequal pupils, exaggerated patellar reflexes, and other evidences of *scleros in plaques*. He gave a history of syphilis, and confessed to feeble virile powers. In him the virile reflex was scarcely perceptible. I found it absent on the same day in another, but older patient, with optic atrophy, unequal pupils and cerebral sclerosis, which I regard as one of multiple cerebro-spinal disease. The optic atrophy was diagnosed by Dr. Post and Dr. Wolfner. This man's age, however, is fifty-six, but the sign is not normally absent at that age in healthy men. I have found this sign absent in the status epilepticus, but not necessarily modified in hemiplegia. It was exaggerated in a case of paraplegia of cerebral origin.

It should receive further consideration at the hands of neurological clinicians, for it appears worthy a place in clinical neurology with Westphal's papadoxical contraction, Erb's reaction of degeneration, or any of the hitherto recognized diagnostic reflexes.

SOME PRACTICAL POINTS IN THE DIFFERENTIAL DIAGNOSIS OF IRITIS AND CONJUNCTIVITIS.

Dr. Frederick E. Cheney, writes in the *Boston Med. Surg. Jour.* that the importance of making a correct and early diagnosis, in cases of iritis, and of using atropine, or some other mydriatic, until the inflammation has subsided, is evident, when it is considered that many patients are afflicted with permanent poor vision and not a few with blindness, as a result of improper treatment in this disease. In most of these cases the trouble has probably been mistaken for conjunctivitis, the eye has been treated with "borax and camphor," or some other mild astringent collyrium, and a disease which usually terminates favorably when treated from the beginning with atropine terminates most unfavorably.

The presence or absence of pain, and its character and situation, if present, is a symptom of great value, and cannot be too carefully investigated. In conjunctivitis, there is often no pain, other than a feeling of "sticks and sand" in the eyes, while at other times pain of moderate severity is complained of and is referred by the patient to the eyeball. In iritis, on the other hand, pain is usually a prominent symptom, it is paroxysmal in character, coming on most frequently in the early hours of the morning, and is not situated to any degree in the eyeball itself, but in the brow and temple, sometimes extending over the entire side of the head. If this neuralgic pain is of great severity, especially if accompanied by a marked rise of temperature and a loss of appetite and flesh, the redness of the eye may be overlooked both by the patient and physician, or regarded simply as a congestion secondary to the neuralgia. Neuralgia of the temple and brow, in connection with redness of the eye, should always make one suspect iritis as the cause, and should lead to a careful examination of the pupil, as to its size and reaction to light. Having placed the patient facing a bright light, the well eye is to be covered, while the inflamed eye is to be shaded from the light with the examiner's hand. If the case is one of conjunctivitis, the pupil will quickly dilate when the eye is shaded and again contract when exposed to light. If iritis, however, it will be noticed that the pupil is smaller than normal, and that it reacts little or not at all when the eye is alternately shaded and exposed. These three symptoms, redness of the eye, neuralgic pains in the temple and brow, and a pupil which reacts sluggishly or not at all to light, are most valuable diagnostic symptoms in iritis, and when present, should leave doubt as to the nature of the disease. Intolerance of light is usually present in iritis, but may also be present in conjunctivitis. The iritis tissue is usually discolored in iritis, the change at times being very noticeable, while at other times it is slight and can be easily overlooked. The character of the vascular injection should of course be noticed, the circumcorneal vessels being injected in iritis, and the conjunctival vessels in conjunctivitis. It is not uncommon, however, to see a moderate injection of the circumcorneal vessels in conjunctivitis, or to see a considerable injection of the conjunctival vessel, and even œdema of the tissue, in iritis.

To emphasize what has already been said, the symptoms most to be depended upon in making a diagnosis of iritis, are, redness of the eye in connection with neuralgic pains of the temple and brow, and a contracted pupil that reacts sluggishly or not at all to light. Sub-acute and chronic cases are at times met with in which the pain is slight or absent, and the circumcorneal injection but poorly marked. The pupil will, however, be contracted and sluggish, and as the trouble often exists for some time before medical advice is sought, firm adhesions between the pupillary border and lens will probably be found after atropine has been used. Also, in acute iritis, pain may not be complained of the first few days, and in exceptional cases may be absent during the entire course of the disease. The absence of supra-orbital and temporal pain, therefore, although a most frequent and valuable diagnostic symptom, does not exclude iritis, and the presence of other symptoms must always be looked for. If, after careful examination, a doubt as to the nature of the disease still exists, a safe rule to follow is; when in doubt, use atropine. If the disease proves to be conjunctivitis, the use of atropine for the first day or two will have caused no permanent harm, the mydryasis and paralysis of accommodation passing off within ten days or a fortnight. If, on the other hand, it is iritis, we shall have the pupil well dilated, and if kept so by the use of atropine until the inflammation has subsided, it will be almost impossible for adhesions to form between the iris and the lens.

The value of the early and constant use of atropine in iritis cannot be too strongly insisted upon. A wide dilation of the pupil is of course the end in view; and while, as a rule, a one-per-cent. solution of atropine sulphate used three or four times a day will accomplish this, a more frequent instillation or stronger solution is sometimes required.

SURGERY.

METASTATIC CARCINOMA OF THE FOREARM.

The law, that while sarcomata often spread by the blood, carcinomata follow the lymph-channels, has its exceptions. Helferich (Abst. in *Centralblatt f. Chirurgie*, 1891, 14,) gives a unique case of a man 78 years old, with a large spindle-shaped growth which had developed, entirely independently of the skin, deep in the muscles of the forearm. The diagnosis wavered between enchondroma and myositis ossificans. The microscopical examination, however, showed it to be a carcinoma. A second, more careful, examination of the patient then revealed a small tumor the size of a pea, covered with a crust, in the lower lip. This was extirpated and proved to have the same microscopical structure as the tumor in the arm. Inasmuch as this lip-growth had existed for four years, while that in the arm had developed within a year, it seems reasonable to suppose that the latter was a metastasis from the former. The patient made a good recovery after an exarticulation at the shoulder. —*Exchange.*

THE CLOSING OF TREPHINE OPENINGS BY CELLULOID PLATES.

A case was presented to the Vienna Medical Society by Hinterstoisser (*Wiener Med. Presse*, No. 42, Bd. xxxi) showing the successful result of an effort to close a trephine opening by a celluloid plate. The patient, some months after recovering from a comminuted fracture of the left parietal bone, suffered from giddiness, weakness, loss of power in the right side, and chronic twitchings of the right facial region and the corresponding upper extremity. Three years later epilepsy developed. Examination showed a hyperæsthetic depressed cicatrix corresponding to the position of the upper portion of the ascending parietal convolution. There was also bilateral concentric narrowing of the field of vision, diplopia on looking to the left, and sensory and motor paresis of the left side. The cicatrix was excised, a periosteal flap raised, the depressed bone removed, and the healthy non-adherent dura incised, showing normal brain cortex. The dura was sutured; on the fourth day it was found united. A polished celluloid plate was now fitted over the trephine opening, the periosteum was stitched over this, and finally the skin wound was sutured. Healing was prompt and all brain symptoms ceased. Two other successful cases were also reported where celluloid plates were used in a similar manner.—Quoted in *Amer. Jour. Med Sc.*, June, 1891.

THE EXTRACTION OF BROKEN NEEDLES.

Dr. Charles Steele, thus writes in the *Lancet*: All who have had much to do with this minor operation know how frequently a satisfactory result fails to be obtained unless the indications for a safe operative procedure

are strictly observed. It is most unpleasant, after cutting and probing with the finger and forceps, to be obliged to tell a patient who has endured some pain and much discomfort that further attempts are useless, and that the fragment is still there; and perhaps suggest as the best consolation that the needle has a more free opening by which to work its way out. I have for many years declined to cut unless I could make out the situation of a point, and that the other end had a firm bearing to rest upon; giving the assurance that patience and watching are the proper treatment for the time being.

Lately I have adopted a very simple, painless, and reliable plan, and have regretted that I had not thought of it in many previous instances. Last autumn, when I was visiting a child, a young lady, his sister, came into the room using her right foot naturally, but resting only on the toes of her left foot, and explained that she had gone about in this way for fully three weeks, as she had broken a needle into her left heel, and the slightest touch gave her great pain. The point of entrance was visible in the middle line in front of the tuberosities of the os calcis; the end of the fragment could be recognized through the skin, but the slightest pressure made it recede. I declined to operate, but directed that two thick felt corn plasters, one on the other, should be applied, with the puncture occupying the central hole, and that she should walk freely and bear well upon the heel. This she did with perfect ease, and after ten days the needle presented, and was withdrawn readily. It was the eyed end, and almost an inch long. Soon after I saw a little girl, aged three years, who when away from home in the summer had also trodden upon a needle, which broke and entered between the ends of the metatarsal and tarsal bones. A surgeon saw her promptly, cut down, and tried for some time to extract, but failed. She often felt no inconvenience, but at intervals limped suddenly, and complained of pain. She was persuaded to wear a corn plaster, and after three weeks the portion of needle, which had been in more than three months after producing a little superficial irritation, showed itself, and her nurse drew it out. The wrist and the ball of the thumb are not unfrequently punctured, and if the fragment enters obliquely, or lies close to arteries or nerves, and cannot be forced into prominence, attempts at extraction are, to say the least, undesirable; whereas, by adopting this simple method, after the manner of removing a thorn with the pipe of a key, and producing pressure with an elastic wristlet or slight steel spring like a small truss, the fragment will work out, and not give pain from knocks while under the skin. In that awkward position, the soft parts by the sides of the ligamentum patellæ, this plan can be used. It recommends itself to everyone's common sense, and has the great advantage of not leaving any cicatrix.

A FEW SURGICAL EXPERIENCES AND WARNINGS.

Mr. W. F. Favell read a paper before the Sheffield Medico-Chirurgical Society in which he said that while freely acknowledging the great results which had followed upon the improved surgical procedure of the last 20 or 30 years, he defended the principle of conservation in surgery, and laid down as a general proposition that in the case of malignant growths, for example, unless they could be removed wholly, they were better left alone altogether. He instanced some cases in point from his own experience. He had a great dislike to incompetent operations. He deprecated exploratory incisions in the case of tumors, unless the surgeon was prepared at the time to remove the tumor bodily, if necessary, all such measures tending to stimulate the growth into increased activity. Mr. Favell then referred to the danger in certain cases of going to the other extreme, and of the severity and magnitude of the operation, risking life without the fair prospect of good ultimate results in so-called "successful" cases. He instanced the recommendation of Mr. Mitchell Banks, that in all cases of removal of malignant tumor from the breast, all the auxilliary glands should be extirpated at the time, whether diseased or not. This, which was a large operation, was not without immediate danger to the life of the patient, and Mr. Favell doubted the alleged greatly diminished probability of return after its performance. He had grave doubts as to the wisdom of meddling with an axilla in which there was no evidence of cancerous implication. Axillary glands were very difficult to clear away from their deep situation and attachments, and he believed the tearing of the cellular tissue, where the use of the knife was contra-indicated, might be productive of irritation calculated to increase the liability to a return of malignant growth. Thus he instanced a very striking case bearing on his remarks, which had occurred in his own practice. Mr. Favell then proceeded to speak of the danger of catheterization in certain cases of retention from chronic

prostatic enlargement, when the bladder contained a considerable amount of residual urine and the kidneys were diseased; quoting from Sir Benjamin Brodie, who suggested the advisability of only at first partially emptying the bladder from time to time, Mr. Favell mentioned a case in which he had seen adynamic symptoms, followed by a fatal result in three or four weeks, after the first introduction of the catheter, and on the other hand he had known other people live with a condition of incontinence from overflow, in comparative comfort for months and years, where catheterization had not been resorted to.

TRANSPLANTATION OF TEETH.

In a monograph on this subject, Dr. Julius Scheff details a large number of experiments made on animals, together with histological examinations, which tend to show that, in the majority of instances, the union is periosteal. It may take place by first intention, the alveolar periosteum uniting directly with the cement of the tooth without absorption of the latter; or the periosteal proliferation may produce a more or less extensive absorption of the cement, which if carried too far, may result in extrusion of the tooth. The experiments also demonstrated that the pulp of every implanted tooth becomes necrotic, and this condition may exist, notwithstanding the occurrence of firm periosteal adhesions; or a new tissue may take the place of the necrotic structures. In the dog, this new tissue originates in the pulp canals, and consists of a delicate vascular connective tissue, which differs from the normal pulp by the absence of odontoblasts, or it may result from a proliferation of the periosteum into the pulp canals through openings caused by absorption of their walls. If the latter occurs, the periosteum may undergo osseous transformation, after absorption has ceased.

Of great interest in this connection are the investigations recently made by a Russian physician, Dr. Znamensky regarding the implantation of artificial teeth both in animals and human beings. He experimented with teeth constructed of porcelain, hard rubber, and metal, at the roots of which he made a large number of fine incisions. The process consisted in a proliferation of granulation tissue from the alveolar walls into the fine openings at the root of the tooth, thus holding it firmly in position. It is questionable whether artificial teeth can be embedded with sufficient firmness to withstand, for any length of time, the violence to which they are subjected during mastication.—*International Journal of Surgery.*

THE QUESTION OF SURGICAL INTERFERENCE IN PERFORATING WOUNDS OF THE STOMACH AND INTESTINES.

Reclus (*Cblt. of Chirurg.*) gives three new cases, from the French literature, where the opium treatment without laparotomy gave favorable results. Altogether Reclus has gathered ninety-one cases in which systematic expectant treatment was carried out with 75 per cent. of recoveries. On this basis he believes that laparotomy should be employed only for one or more of the following indications: (1) Cases where the intestines protrude through the external wound; (2) where signs of internal or external hæmorrhage are present; (3) where percussion in the region of the liver, or the introduction of a catheter through the external wound shows the escape of gas or intestinal contents into the peritoneal cavity; (4) when the nature of the trauma (e. g. the full force of a horse-kick) renders probable an extensive laceration of some viscus; (5) when in spite of energetic internal medication the signs of a peritonitis occur. The last indication Reclus admits to be very questionable.—*Ex.*

GYNÆCOLOGY.

SALPINGITIS AND CASTRATION; ARTIFICIAL EVACUATION OF COLLECTIONS OF FLUID IN THE TUBES THROUGH DILATATION AND DRAINAGE OF THE UTERUS.

Doléris (*Nouv. Arch. d' Obstet. et de Gyn.*) speaks against the abuse of castration in salpingitis, which can be found even to-day. Very often the operation is performed without the presence of sufficient indication; frequently in cases which are still amenable to conservative treatment. After a description of the different kinds of collections of fluid, he emphasizes once more in the conclusions that every salpingitis should be watched for months, and castration should be regarded as a *derniere ressort.* A large number of cases could be cured by artificial evacuation through the uterus.

His procedure consists in:

1. Dilatation of the uterus. First, laminaria tents are used, then sponge, which is rendered aseptic and pushed up to the fun-

dus uteri. Through the swelling of the sponge the uterine openings of the tubes are dilated.

2. Careful curetting of the uterine recesses, in order to remove hindrances which might interfere with the discharge, and which are often caused through a proliferation of the mucous membrane near the orifices of the tubes.

3. Drainage of the uterine cavity by packing it with iodoform gauze soaked in glycerine. The gauze must be changed every day; at most, every second day. According to the diminution of the tumor, the amount of gauze is gradually diminished.

After the operation the patient receives daily antiseptic irrigations of the vagina; afterward, an iodoform-glycerin tampon is introduced.

Doléris emphasizes especially the fact that the patient should rest for a long time after treatment, and especially should remain in bed at the time of the first menstruation.

Not in all cases has Doléris had the desired result.—*Ann. Gyn. Pœd.*

THE TREATMENT OF UTERINE FIBROIDS WITH APOSTOLI'S METHOD.

N. Kjaerguard, Copenhagen (*ibid.*), has treated twenty cases and gives the history and results of treatment in detail. Two deaths occurred—one in a very weak patient, with a cardiac lesion and with a growth in the uterus the size of a child's head. There were very severe hæmorrhages which resisted all forms of treatment. She had had eight applications of positive intra-uterine galvanism, ranging in intensity from 40 to 140 milliampères, and had borne them well; she was then given negative intra-uterine applications, and after the third séance (185 milliampères) fever set in and on the eighth day she died from heart weakness (?). No autopsy.

In the second fatal case the patient suffered with chronic bronchitis, with dilated bronchi, and had a growth of about the size of a child's head. In this case the hæmorrhage was only temporarily arrested by positive intra-uterine applications. In the last séance the hæmorrhage following was so great as to necessitate an intra-uterine tampon. A hysterectomy was then done, but the patient died within twenty-four hours. In the uterine cavity was found a large venous opening of about the size of the radial artery. Presumably the copious hæmorrhage occurred from this opening.

In the remaining cases the results obtained were very good; the hæmorrhages were arrested or, at least, much diminished; the pains vanished, and the symptoms due to pressure decreased in a marked degree.

TORSION OF THE PEDICLE IN OVARIAN CYSTS.

Küstner (*Centralblatt für Gynäkologie*, 1891) has made a number of observations bearing on this interesting subject, and differs from other authors in his explanation of the etiology. In his last thirty-six ovariotomies he found in fourteen cases (38.8 per cent.) torsion of the pedicle up to at least 180°. Rokitansky records 13 per cent., Thornton 9.5 per cent., Olshausen 6.3 per cent., and Horwitz 23.2 per cent. He explains the greater frequency of this complication in the Dorpat clinic by the fact that in most of the cases inflammatory adhesions existed. In the majority of the cysts of the right ovary the torsion was toward the *left*, in those of the left ovary toward the *right*. His explanation is as follows: As soon as the tumor rises out of the pelvis and comes in contact with the abdominal wall it tends to fall forward, displacing the uterus backward. The ovarian ligament is now put on the stretch and crosses the tube, so that when the tumor lies in contact with the abdominal wall there is really a torsion of its pedicle to the extent of 90°, which is usually overlooked at the time of operation. If the pedicle is small, and the abdominal wall relaxed, changes in the centre of gravity of the tumor are readily produced by changes in the position of the patient; when she lies upon her left side it tends to rotate from right to left, since the infundibulo-pelvic ligament (which is its principal attachment) extends from the posterior wall of the pelvis anteriorly from right to left. The reverse is the case when she lies on her right side. This torsion is probably only temporary. After the neoplasm occupies the abdominal cavity the pressure of the intestines upon its posterior surface during peristalsis tends to increase the existing torsion; this pressure on the right side is exerted most upon the left side of the tumor and *vice versa*. This theory was supported by a case of double ovariotomy of the writer's, in which the pedicle of the left tumor was twisted 180° to the right, and that of the right to the left.—*Amer. Jour. Med. Sci.*

OBSTETRICS.

FIVE HUNDRED LABORS WITHOUT INTERNAL DISINFECTION.

Mermann completes his account of a series of 500 labors without an internal disinfection, in the *Centralblatt für Gynakologie*, No. 20, 1891. In the 500 cases there occurred no death from sepsis or its complications. In the last 200 cases a vaginal douche was given once, in a case of placenta prævia which had been tamponed before admission to the hospital. The complications of pregnancy and labor are all fairly represented in the series, and with surprisingly good results. The only precaution taken against ophthalmia was irrigating the eyes with distilled water; but one case, and that a mild one, occurred.

Mermann employs scrupulous cleanliness and antisepsis externally but none internally, and limits vaginal examinations to the least possible number.—*Amer. Jour. Med. Sc.*

AN EPIDEMIC OF PUERPERAL FEVER.

This unusual occurrence in a well-conducted clinic forms the subject of an interesting narration by Döderlein, of Leipzig (*Archiv. für Gynäkologie*, Band xl. Heft 1), whose contributions on the bacteriology of sepsis are familar. Three cases of lymphatic infection by the staphylococcus pyogenes aureus and streptococcus pyogenes occurred, the focus of infection being suppuration beneath an ill-fitting glass eye in a patient's orbit. In some manner the midwife who examined her infected her genital tract and that of two others, one of whom died. By control experiments upon animals it was observed that the union of the two microorganisms produced an especially virulent infection. From the standpoint of treatment the intra-uterine douche is of value as soon as high fever announces the infection; if delayed, the micro-organisms are beyond the reach of the antiseptic and the douche is harmful. It is given by Döderlein by inserting a Cusco's speculum, washing out the vagina with sterile water and inserting a glass douche-tube into the uterus through which sterile water is allowed to run until it is seen that the flow is uninterrupted. A 2 per cent. creolin solution is then used to thoroughly douche the uterus. For the treatment of puerperal peritonitis, he advises absolute rest, ice to the abdomen, antipyretics, and opium. He believes that internal examination for diagnosis should be as infrequent as possible.

EXAMINATIONS IN REFERENCE TO THE CONSISTENCE OF THE BLOOD DURING PREGNANCY AND IN THE PUERPERIUM, AND THE COMPOSITION OF THE AMNIOTIC FLUID.

Nasse, in 1836 made examination of the blood of twenty-seven pregnancy cases, and at the end of twenty years had examined thirty-seven more. His results showed that the specific gravity is diminished, especially up to the eighth month, the fibrin is increase, there is a diminution of hemoglobin and a diminished number of red blood corpuscles, so that the condition during pregnancy is really one of chlorosis, and that this condition will explain many of the symptoms. Spiegelberg and Gscheidlein, on the other hand, found (experimenting on pregnant dogs) that the amount of blood was increased during the last half of pregnancy; that the amount of hemoglobin is rather increased than diminished, and that the amount of water contained is only slightly increased, if at all. Cohnstein observed that the amount of hemoglobin is increased, but that there is a diminution in the number of red blood corpuscles (experimenting upon pregnant sheep.) Fehling experimented upon pregnant women, and found that the hemoglobin was increased, as were the number of red blood corpuscles. He also examined the blood post partum, and found that in the majority of the cases (forty-seven out of eighty-three) the amount of hemoglobin was diminished, in ten it remained unchanged, and in twenty-six there was slight increase. The greatest diminution (forty-one per cent) occurred in cases of placenta previa, due, of course, to the great loss of blood. Counting the red blood corpuscles showed three to four million to one cubic millimetre (minimum 2,330,000, maximum 4,750,000.) After delivery a diminution of their number occurred. This would go to prove that a chloro-anemic condition is not a normal condition in pregnant women. For these experiments Fleischl's apparatus was employed.

Meyer made experiments in Berne, and they gave entirely different results from Fehling's. He showed, first, that in pregnant women during the latter months the number of red blood corpuscles and the hemoglobin are diminished; second, a short time after delivery the number of red blood corpuscles and the amount of hemoglobin are markedly

diminished—this must be atributed to the loss of blood during labor; third, in the puerperal state an increase of red blood corpuscles and hemoglobin occurs, and this is sometimes greater at the end of the second week than it was during pregnancy.

Reinl, seeing that the two previous experimenters differed so materially, took up the subject, and his results corresponded quite closely with those of Fehling, namely, that there is no chloro-anemic condition normally existing during pregnancy.

In making his experiments, Shrœder (*Archiv. f. Gynœkologie*) employed two instruments—Fleischl's hemometer and Gowers' hemoglobinometer. The blood was obtained by pricking the finger of the patient with a needle and mixing it with distilled water. To count the number of red blood corpuscles, the melangeur of Thoma-Zeiss was employed. The blood was mixed with ordinary salt solution. Two drops were always counted. Experiments were made upon forty-two cases, eight of these living in the hospital during pregnancy; the remainder did not enter until just before their delivery. Of these eight, three showed a small amount of increase of the hemoglobin, three a marked diminution in the same, and two were chlorotic patients. In all but one case a diminution in the number of red blood corpuscles was observed. Of the thirty-four who lived out of the hospital, twenty-five showed an increase in the amount of hemoglobin, and only nine showed a diminution. From these results we must acknowledge that an increase in the amount of hemoglobin occurs three times as often as does a diminution, as shown by my experiments as well as those of Fehling and Reinl. As to the number of red blood corpuscles in these cases, in the nine there was diminution corresponding to the diminution in the amount of hemoglobin. Of the twenty-five cases, in all but four there was an increase in the number of red blood corpuscles. These experiments were all made before delivery.

The blood was next examined two days after delivery, and in nearly all of the cases there was a dimunition both in the amount of hemoglobin and the number of red blood corpuscles. This fact can probably be attributed to the blood loss during labor.

The third series of experiments were made upon the women from ten to twelve days after delivery. In twenty-five of the cases the amount of hemoglobin was increased, in eight it was diminished, and in four it remained unchanged. In twenty-two cases the number of red blood corpuscles was increased; in fifteen cases it was diminished.

Experiments were also made with reference to the relationship between the conditions of the amniotic fluid and the hemoglobin, with the following results: We must consider the amniotic fluid as a serous transudation from the maternal vessels, and this undergoes the same changes as does the blood during pregnancy. If the amount of hemoglobin is increased, then the amount of albumen in the amniotic fluid is also increased.

PÆDIATRICS.

THE ETIOLOGY OF CROUPOUS PNEUMONIA.

Modern medical research has devoted considerable attention to the study of the etiology of disease. In the department of bacteriology discovery upon discovery, indicative of the causal relation between microörganisms and disease, has been made and verified. In the enthusiasm and excessive zeal which attended the promulgation of a new and promising doctrine, the indifferent student is apt to ignore important accessory conditions in a desire to reach a preconceived ideal.

At this day no unprejudiced mind will attempt to controvert the validity of the germ-theory of disease; but we have not done in accepting the principle which the theory implies. Something more than a germ is requisite for the production of disease—not that the germ is a mere concomitant, but that, while perhaps the most important, it is but one of a number of elements, the association of which is the essential factor in the determination of a definite result; the soil must be fertile and the conditions propitious for growth and development. How else explain the immunity of some and the infection of others exposed to like influences under conditions apparently similar? Though we may never be able to explain the mode of action, it is well to recognize this association of etiological elements; while not detracting from the importance of the part played by microörganisms in the production of disease, we must not ignore or underrate the significance of other factors.

In a study of one hundred cases of uncomplicated croupous pneumonia, Brunner (*Deutsch. Archiv für klin Medicin*, Hefte 1 and 2, 1891) was able to determine that the

disease is more common in males than in females; that most cases occur in the third and fourth decades of life; that those who lead active lives in the open air are predisposed; that the right lung is more commonly involved than the left; that the onset usually takes place in the morning with a chill; and that the disease is most pervalent in winter and in spring. Careful comparative observations upon the mean temperature, the mean humidity of the atmosphere, relative and absolute, the mean barometric pressure, as well as upon other meteorological conditions, in conjunction with the number of cases of pneumonia observed at different periods, revealed the fact that most cases occurred when the temperature was low, the absolute humidity slight, the relative humidity great, and the barometric pressure very high or very low. It appeared that those meteorological conditions that increased the physiological activity of the lungs favored the development of pneumonia.

The brief period of incubation which characterizes pneumonia may be explained by the almost constant presence of pneumonia-cocci in the air-passages, suitable extrinsic and intrinsic conditions conferring virulent properties upon a hitherto innocuous agent.

From many considerations it therefore appears that merely waging warfare against bacteria will not eradicate disease. The physical difficulties to be overcome alone render such a mode of treatment impracticable. A rational prophylaxis will have for its object the avoidance, as far as possible, of exposure to infection to deleterious influences of all kinds.—*Med. News.*

EUCALYPTUS OIL IN THE TREATMENT OF SCARLET FEVER.

As being the first person to bring before the notice of the profession the method of treatment of scarlet fever by inunction of eucalyptus oil in combination with other essential oils and camphors, allow me to point out to Dr. Knox Bond that his treatment of scarlet fever by eucalyptus oil was not after the method recommended by me in a paper to be found in the Transactions of the Epidemiological Society, and which has been republished by Lewis in a separate form. I am not astonished that his trial failed, and could have told him that it would if he had communicated with me. I and my son and many medical men have during the last two years treated all scarlet fever cases by inunction of Tucker's Eucalyptus Disinfectant with uniform success, shortening the duration of the fever, enabling the patients to mix with the rest of the family after ten days, requiring no isolation, and preventing all serious sequelæ. He will see in my paper that I condemn all greasy preparations for inunction, but the essential oils and camphors composing the disinfectant are all highly volatile, and are in no way greasy. I should like also to inform him that most of the eucalyptus oil of commerce does not possess the antiseptic qualities that are absolutely necessary for its successful use in infectious diseases. I have for some years tested experimentally the different eucalyptus oils, as well as other essential oils, and hope one day to make known the results of my inquiries, for there are some of these oils that are more powerful antiseptics and germicides than the oil of eucalyptus globulus.—Dr. J. Brendon Curgenven in the *Lancet.*

HYGIENE.

SULPHURING OR BLEACHING DRIED FRUIT A MISTAKE, IF NOT A CRIME.

Dr. Joel W. Smith, in a paper before the American Public Health Association, calls attention to a subject which should command the careful attention of consumers of dried fruit, of conscientious fruit dealers, and of all health authorities.

As fresh fruit is not always obtainable, various methods for preserving it are in use, drying being one of the oldest and best for many fruits. Middle-aged people recollect when sun or air drying was the only method for market. Then some good housewife discovered that more rapid drying by artificial heat, with or without the addition of sugar, was a cleaner method, safer against fermentation and decay, retained the flavor better, and the fruit was also lighter colored, than when sun or air dried. The present evaporators are only an enlargement of the idea of such more rapid drying, while canning consists in the exclusion of the microörganic germs of fermentation.

This is an age of progress, yet experience often shows that not all changes are improvements. It is about fifteen years since the sulphuring or bleaching of dried fruit began. At first only the uniform light color was sought, as in apples, pears, etc., but for some years past nearly all the large evaporating establishments have "sulphured" all kinds of fruits and some vegetables, and now

much of the California sun-dried fruit for market is also treated in the same manner. The light color, especially of apples. early attracted unthinking consumers and commercial men, thus materially increasing the price of such fruit. That caused the practice to spread even to those who disapproved of it. The expense and trouble were very slight. Fruit so treated is said to dry more readily, consequently all now prefer to do it.

While the apparent change is only in color, there is a loss of the natural fruit flavor, even by the most careful sulphuring. Unfortunately, some people do not notice the difference, but careful comparison shows it, as is admitted by the manufacturers of such fruit.

The practice began in California with apricots, as early as 1879. At the Twelfth State Fruit Growers' Convention, held in Fresno during four days in November, 1889, a paper on "Fruit Drying" was read by J. L. Mosher, of San José, and in his paper he remarked,—"If fruit be picked before ripe and over-sulphured to produce whiteness, it is devoid of its true rich taste and flavor, and *only requires polishing to make buttons.*" (The italics are his.) In discussing the paper, one gentleman said,—"I believe sulphuring the fruit is the greatest mistake in the world. I do it, but I believe it is wrong: the flavor of the fruit is gone after it is sulphured."

This change in quality was the first thing that called the attention of the writer's family to what was lacking in the "nice, uniformly colored" bleached fruits.

Later investigations have proved the presence of sulphate of zinc, "white vitrol," in all samples of fruit where zinc-surfaced trays were used to hold the sulphured fruit while drying. Interested parties have charged the German prohibition of American evaporated apples to rival trade opposition, but there is no German fruit to compete with them. The real cause was the finding of zinc poison in considerable quantity. A good paternal government aims to protect its people.

WHY SULPHUR FRUIT AT ALL?

The advocates of sulphuring fruit say,—(1) It dries quicker, (2) looks better, (3) keeps better, and (4) sells better. Besides, it makes ripe, unripe, and poor fruit all look alike; and if not so good for it, but few know it.

Sulphurous acid is formed by burning sulphur, and is readily absorbed by water. It abstracts oxygen from many vegetable substances, and thereby bleaches them. It also tends to prevent microscopic organizations that cause fermentation. The acid in liquid form is colorless, very cheap, and smells like burning sulphur; is antiseptic, a preservative fluid for some substances,—sample fruits, etc. Sulphur is often burned to disinfect sick-rooms of disease germs, and to kill rats, mice, and vermin, but its use with food is objectionable. Ants and other insects, it is said, will not touch sulphured fruit, while they readily attack well ripened fruit that is not sulphured. The instinct of insects and animals is sometimes better than the practice of human beings. In general, substances that repel such creatures are hardly safe for human food.

THE EFFECT ON CONSUMPTION

has seemed to be a decided falling off in demand among the more intelligent class of people. Retail grocers know that many who once used dried fruit extensively say, "Somehow we have lost our relish for it," and have almost ceased to use it since the craze for sulphuring fruits began. Fruit men say, "The public demands sulphured fruit, will pay more for it, and we will supply it." The public will yet show them that it can get its eyes open. As the green and canned fruit interests are the only permanent gainers by the sulphuring process, they are interested to have it continued.

DIFFICULT TO OBTAIN.

It is not easy to obtain a superior quality of unbleached fruit. In 1889 several retail grocers who understood the question corresponded with parties evaporating apples. The reply was, that "if an order for not less than twenty barrels was received at one time, apples would be furnished unbleached, otherwise not."

SULPHURING NOT DESIRABLE.

The slightly yellowish-brown color of unbleached dried fruit is an evidence of ripeness, good quality, and proper drying. The more rapid the lighter will be the color, and the fruit will keep well if at once properly excluded from the air. When sulphured, the good, the poor, and the unripe all look alike. Not so with the unbleached. No poor nor unripe fruit can make good dried fruit. The gain of sulphuring is always with the dealer, and not with the consumer.

HEALTH AGAINST LOOKS.

In preferring looks to quality, the people are often at fault. Public enlightenment

will correct most dietetic errors. Good health is now sought by many, and will be by more in the near future, through correct living, rather than by the swallowing of drugs. And in that more excellent way, "in the good time coming," there will be no demand for sulphured and other drugged fruit among intelligent people.

DANGERS.

There is danger from fruit in metal cans, as is well known, and fresh fruit is frequently unobtainable, while both are often more expensive than dried fruits. Good unsophisticated dried fruits are always harmless. If green fruits are at times unobtainable, canned fruits dangerous, and a popular craze has rendered dried fruits also dangerous, what can the suffering public do? It is between the alternatives of using no fruit, or that which is injured or poisonous. Is the sulphuring of fruit a mistake, or a crime?

TO CORRECT THE ERROR,

enlighten the people, and prohibit injurious practices. Legal suasion only will stop it at present. The common schools in many states are required to teach the effects of alcohol and narcotics. Why not also include the effects of different foods?

MEDICAL CHEMISTRY.

APYONIN.

Apyonin is the name of a substance of the methyl violet class which has been introduced as an antiseptic similar to Merk's pyoktanin. It is a yellow, crystalline powder, slightly soluble in cold and hot water, soluble in alcohol, and difficultly soluble in ether. Heated it sublimes, charring at a higher temperature, and burning without ash. The water solution is neutral, and gives a precipitate with caustic potash, which is soluble in alcohol. The plain solution produces colors on the addition of hydrochloric acid or peroxide of hydrogen solution. We are without particulars of the therapeutics of this substance, which is made by Petit, of Paris.—*Chemist and Druggist.*

IRON SALTS—THEIR FATE AFTER ENTERING THE CIRCULATION.

Jacoby (*Archiv für Experimentelle Pathologie und Pharmakologie*, Vol. XXVIII.; p. 264.) recently investigated this subject by experiments on animals. He found that the iron salts, when injected into the blood, are eliminated in a few hours to but a very small extent (about 10 per cent.) with the urine, intestinal secretions, and bile; the greater part (about 50 per cent.) however, is deposited in the liver, and the remainder in other organs (spleen, kidneys, walls of the intestines. This deposition is ended in 2–3 hours, after which the blood is free from the metal introduction.—*Merck's Bulletin.*

IODIDES OF ANTIPYRIN.

M. Duroy reports (*Bulletin de l' Academie de Médicine*) that he has obtained several iodides of antipyrin, all of which are capable of being used in therapeutics. The method of preparing an iodide of antipyrin is very simple. One equivalent of iodide dissolved in alcohol of 90°, and brought into contact with an equivalent of antipyrin dissolved in five times its weight of distilled water, yields a brick-yellow precipitate which is antipyrin iodide. It is soluble in two-and-a-half times its weight of water at 25° C.

NEWS AND MISCELLANY.

FANCIFUL ANIMAL REMEDIES.

Edible birds' nests are, of course, in high repute as aphrodisiacs, but they are more food articles than medicines.

The shells of the mollusca are used medicinally, thus *clam shells* are cathartic; *oyster shells* administered for deafness. *Fossilized shells* are used as a powder in ophthalmia and in scabies; internally in fever and in syphilis. *Coral* is also applied in powder to opacities of the cornea, and as an astringent for epitaxis.

Seed Pearls are prescribed in affections of the heart and liver; in the form of a powder to ulcers, and opacities in the cornea; in deafness it is put into the interior of the ear, and is applied to pustules of small-pox. This remedy is, however, dear, being quoted at $160 the catty or pound.

Petrified crabs are applied to boils and sores, etc. Fragments of these fossil crabs crushed, powdered and finely levigated are used in opacities and other affections of the eyes, and sell at from $30 to $300 a picul in different localities.

If we pass to the lower order of insects, we find the skins of the *dung beetle* fetch £3 the cwt., for medicine. The flesh flies

(*Musca carnivora*) collected on putrid carcases are torrefied and employed as drugs. *Maggots* are prescribed in the delirium of fever and dysentery. *Silk-worms* in cystitis; after being burnt the ash is mixed with wine and drank, in order to cause the bursting of abscesses.

The larva of the *grasshopper*, torrefied and pulverized, made into pills, are considered anthelmantic and given to children in fevers.

Wood bugs (*Cimex*) are also torrefied and given as medicine. The bodies of *Cicada sanguinolinta*, with the wings and feet taken off, are considered a cure in hydrophobia.

Caterpillars are considered good for bronchial complaints; are given as a purgative and anti-spasmodic, and are apparently cheap, selling at $6 the picul. The cocoons of a caterpillar are applied in inflammation of the eyes.

A decoction of *centipedes* is used in gonorrhœa; powdered they are applied externally to venereal sores, but it costs $150 a picul.

Cantharides are used in hydrophobia.

Cuttle-fish bone, mixed with native wine, is given for cancer.

A species of green *mantis* and its nests are used in cases of incontinence of urine and spermatorrhœa. The *cricket* forms the basis of a medicine to throw out splinters which have entered into the skin. It is considered anti-hydropic. Three or four such crickets are administered in a wineglassful of Chinese rice wine. The drone or *wasp* is used in cases of bites by spiders, ulcers and leucorrhœa. It is said also to cure toothache.

But while we may smile at most of these Chinese remedies, it should be borne in mind that as great ignorance prevailed, and as much prejudice existed among ourselves in times not long passed, before chemical knowledge and scientific discoveries had made such rapid strides.

Take for instance the following asserted facts:

Had one of our ancestors a distressing toothache, there were ready at hand the *weevil* and the *lady-bird*, either of which would be crushed and applied to the afflicted part. Nay, did he wish to get rid of the offending organ altogether, he had but to touch it with the ashes of burnt "emmets or pismires," and straightway the tooth would drop from the gum. Had he the misfortune to sprain his leg or bruise his foot? Two at least of the beetles which dwell in the excrementitious matter, *Geotrupes* and *Aphodius*, were specifics held in high estimation. The yellow matter which exudes from the joints of the oil beetle was held to be as efficacious in dropsy or rheumatism as in hydrophobia, and no doubt was so. Another infallible remedy against the bite of a mad dog consisted of the fat white *maggots* generated in the putrid carcase of the dog itself. Truly a case of homœopathy run mad! That foul disease, leprosy, could not stand before the bruised body of a *meal-worm*. The great jaws of the *stag-beetle* when powdered, we are told, proved a certain cure in most of the maladies incidental to childhood. The different *tree bugs* were good against ague; the male cricket taken internally could drive away a cold. Was the cold accompanied by headache? There were plenty of remedies at hand, such as *earwigs* and *cockroaches*. This last insect was especially valuable, for according to Dioscorides (whose receipt was unhesitatingly reproduced by Mouffié in the 17th century), the fat of the cockroach, pounded with oil of roses, was singularly efficacious in earache, and the same insect boiled in oil removed warts. Snake poison, too was rendered perfectly harmless, if the patient could be induced to swallow one or two *bed-bugs!*

There was a time when three *gnats* were taken as a dose, just as three grains of calomel might be taken now; while three drops of *lady-bird's milk* were formerly prescribed as seriously as a small dose of some fashionable medicine at the present day.

It is even still alleged that the little insect known as the *golden cetonia*, found in considerable numbers on rose trees, when pounded to a powder and administered internally, produces in the person a sound sleep, which lasts sometimes thirty-six hours, and which has the effect, in many cases, of nullifying hydropic symptoms.

A kind of paste made from the cockroach, administered internally, was found one of the most powerful antispasmodics known, and particularly useful, when diluted with water, in the case of lock-jaw.

Considering the number of species (at least 150,000) and the varied properties they possess, it is astonishing how few insects have been pressed into man's service, either for curative or culinary purposes.—P. L. Simmonds, in *Amer. Jour. Pharm.*

It has been calculated that the electromotive force of a bolt of lightning is about 3,500,000 volts, the current about 14,000 amperes, and the time to be about 1–2000 part of a second. In such a bolt there is an energy of 2,450,000 watts, or 43, 28, 182 h. p.

PRELIMINARY PROGRAM OF THE FIRST ANNUAL MEETING OF THE AMERICAN ELECTRO-THERAPEUTIC ASSOCIATION.

TO BE HELD AT PHILADELPHIA, PA., SEPTEMBER 24TH, 25TH AND 26TH, 1891, IN THE HALL OF THE COLLEGE OF PHYSICIANS, CORNER 13TH AND LOCUST STREETS.

FIRST DAY, THURSDAY, SEPTEMBER 24.

3 P. M.

1. President's address—Dr. G. Betton Massey, Philadelphia.
2. Electro-Therapeutics in America; An Historical Survey—Dr. A. D. Rockwell, New York.
3. The Action and Application of the Faradic Current in Gynæcology—Dr. Augustin H. Goelet, New York.
4. Alternative Currents—Dr. Horatio R. Bigelow, Philadelphia.
5. The Treatment of Corneal Opacities by Galvanism—Dr. C. A. W. Alleman, Brooklyn, N. Y.

SECOND DAY, FRIDAY, SEPTEMBER 25.

10 A. M.

6. Report of Seventy-five Cases of Uterine Myomata Treated by Electricity—Dr. J. H. Kellogg, Battle Creek, Mich.
7. Two cases of Fibroids where Electricity ceased to control Hæmorrhage after a time, although eminently satisfactory at first—Dr. H. E. Hayd, Buffalo, N. Y.
8. The Treatment of Fibroids by Electricity—Dr. W. H. Hutchison, Providence, Rhode Island.
9. Electro-Puncture in Uterine Fibroids—Dr. G. Betton Massey, Philadelphia.
10. Electricity in Chronic Parametritis—Dr. Von Raitz, New York.
11. Report of a case—Dr. A. H. Buckmaster, Brooklyn.

3 P. M.

12. Some New Applications of Electro-Therapeutics—Dr. Frederick Peterson, New York.
13. The Analgesic Effects of Galvanism—Dr. Landon Carter Gray, New York.
14. Electricity in Diseases of the Stomach, with Exhibition of Patient—Dr. Lawrence Wolff, Philadelphia.
15. Electricity in Carcinoma—Dr. Robt. Newman, N. Y.
16. Title not Received—Dr. W. J. Morton, New York.
17. Title not Received—Dr. Henry McClure, Cromer, England.
18. Some Points in the Technique of Electrolytic Epilation—Dr. Plym S. Hays, Chicago, Ill.

8.30 P. M.

BUSINESS MEETING.

THIRD DAY, SATURDAY, SEPTEMBER 26.

10 A. M.

19. A Rare Case of Twin Extra—and Intra-Uterine Pregnancy Treated by Electricity—Dr. G. H. Whitcomb, Greenwich, New York.
20. Electricity in the Treatment of Rheumatism—Dr. W. F. Robinson, Albany, New York.
21. The Treatment of Subacute Articular Rheumatism by Electricity—Dr. M. A. Cleaves, New York.
22. Electricity in Anchylosis—Dr. Von Raitz, New York.
23. Has Electricity any Action as a Germicide, or in Producing Poisonous Results in Food—Dr. W. R. D. Blackwood, Philadelphia.
24. Exhibition of a Rectal Electrode, with Remarks on its Application—Dr. Guy Hinsdale, Philadelphia.

3 P. M.

25. Abdominal Electro-Puncture in an Ovarian Tumor—Dr. G. Betton Massey, Philadelphia.
26. Eight Months' Work in the Dispensary for the Treatment of the Diseases of Women by Electricity—Dr. H. R. Bigelow, Philadelphia.

AN ADVERTISING DOCTOR.

That there is a great deal of humbug in the part of the medical code of ethics which prevents a doctor from advertising in the daily newspapers has once more been proved by an elaborate article from a rhinologist of Rochester, N. Y. This professional nose carpenter is in good standing in the medical profession, ranks well in the American Medical Association, and would probably resent in a way that could not be misunderstood any insinuation that he did not make his daily walk conform to the perpendicular rules of the medical code. The code, it seems, is in no way violated when in an elaborate four-column article copiously illus-

trated he describes in the New York *Medical Record* his success in the work of mending or straightening noses. The article is embellished with look-on-this-and-then-on-that cuts that show the before and after treatment, show noses once as crooked as a ram's horn that under this doctor's magic touch have grown as symmetrical as the face of Powers' Greek slave. All this is set forth in a way to catch the popular eye. It is not set down in these technical terms which tend to tickle the eye and ear of the Hippocratic elect. Though in a professional journal it is written and pictured in a style that he who runs may read and understand.

"But," say the sticklers for the code, "the article is in a medical journal, and not intended for the humble laity." If not for the laity, then why should photographs of homely faces, made handsome, be reproduced? Could not a generous use of the beloved technical terms have made the article as intelligible to the learned profession as pictures? Must the mature man of science be enlightened with object lessons? The facts are the article was prepared for the general public, and to this end will have general circulation. To be sure, the space it occupied was not paid for as an honorable merchant or manufacturer pays for space he occupies in a newspaper when he comes to announcing his ware, but the books of the *Record* will probably show that the author of the article ordered an unusual supply of copies the week his article appeared. Before this time those copies have probably been mailed from Rochester, not to professional men, but to the doctor's old patrons and to a crooked-nose generation.

The object of the article is as patent as is a "for sale" legend nailed to a dwelling house. There was but one object, and that one certainly was not to educate any of the regular *Record* subscribers. It was a case of advertising, pure and simple, a kind of advertising in which the same doctor has often indulged. It is free advertising at that. The code justifies it, and yet not long ago because a Chicago doctor tried precisely the same thing in the daily press, and paid for the same like an honorable man, by the terms of the code he was expelled from the medical profession."

We clipped the above article from one of our daily newspapers, and print it because several such editorials have appeared in this paper. It does not appear to call for an answer, because this whole subject of advertising has been thoroughly gone over, and settled to the satisfaction of the medical profession.

We are always pleased to know that our friends are interested in our welfare, and thankfully do we receive advice upon all subjects, but we believe that we are able to conduct our affairs without any assistance or dictation from "the Press."

Personally, we can see no harm in a man publishing an article in a medical journal and embellishing it with illustrations. Nor can we see the impropriety of ordering reprints of the article, to be distributed as the author may see fit.

It is quite pathetic to see the indignation expressed above, emanating from a business whose chief profit is derived from advertisements. We assure the editor that we are satisfied with the present method, and hope he will not allow himself to be disturbed by any failure upon our part to appreciate his unselfish efforts.—*Cinn. Lancet and Clin.*

THE TRANSFERRED MALADY (A CASE OF METASTASIS).

(IN AN OCULIST'S OFFICE.)

How sweet the girl! I saw her pass
  The waiting group, with dumb surprise;
A golden-haired, trim, willowy lass,
  With heaven's soft azure in her eyes.
What could there be in them to mend?
  Nothing, I stoutly should insist;
But still she asked to see my friend
  The bachelor—and oculist.

I saw her take the patient's chair
  (Venus and Science matched amain),
And, though his search found little there,
  He asked the girl to come again.
But while with his ophthalmoscope
  He sought the source of her distress,
In the next room, with rhyme and trope,
  I tried my rapture to express.

"Neuritis of mild type it is,"
  He said (whatever that may be);
"Here is a wash I use for this,
  But come each day and visit me."
I knew the doctor's ready skill;
  Yet while he battled with the case,
His eyes received from hers a thrill:
  A crimson flush suffused her face.

Daily, as she was bid, she came;
  Daily the doctor scanned her eyes.
A cardiac spasm, I need not name,
  At length he struggled to disguise;
For gazing in those orbs of blue

So close, transferred an aching smart.—
No "wash" he ever gave or knew
For ailing eyes could help his heart.

The girl was cured, the patient lost.
What now avails his utmost fees,
Or rapid skill, to be so tossed
About by Cupid's sharp caprice?
Those blue eyes, had *I* the case,
Should not have been for years dismissed.
To keep them always face to face
I'd die—a baffled oculist.

—Joel Benton in *Harper's Monthly.*

CULTIVATION OF THE LEPROSY BACILLUS IN SERUM.

Dr. Beaven Rake and Dr. G. A. Buckmaster, members of the Leprosy Commission, have during the last two months and a half been engaged in bacteriological work at Almora Leper Asylum and in the new laboratory which has been built at Simla by the Government of India for the use of the Commission. They have now succeeded in cultivating the leprosy bacillus in serum from a blister. The first series of experiments, begun on March 31st, proved negative. On April 14th a blister was raised over a tubercle on the face of a leper at Almora, and another over normal skin on the back of the same patient. Specimens of the fluid from these blisters were taken in a sterilized capillary tube, and allowed to mix. Previous examinations of blister fluid over a tubercle in this patient had shown leprosy bacilli. The capillary tube was kept at a constant temperature of 98° F., and was taken to Simla, where microscopic examination on May 2d showed some brightly stained leprosy bacilli and some turbidity of the liquid. On May 14th a tube of bouillon was inoculated from this tube of serum, and on May 26th there was an undoubted growth of leprosy bacilli on the surface of the bouillon. From this culture vigorous growths of leprosy bacilli were also obtained on gelatine and agar. Another capillary tube of serum prepared in the same way from another leper gave precisely similar results.

"TROPHIC CENTRES IN THE CORD."

Under this title M. Brissaud has contributed an important and suggestive paper, which appears in a recent number of the *Archives de Neurologie.* The paper deals primarily with the subject of alcoholic neuritis, and the subject discussed is whether associated with the changes, which are acknowledged to be present in the peripheral nerves, there may not coexist in the spinal cord some change in the cells of the anterior horns of the grey matter. It is not denied that the chief force of the poison seems to expend itself on the peripheral nerves in alcoholic paralysis, as in other forms of toxæmia in which weakness and muscular wasting are observed, such as lead palsy; but the author contends that as in some of those cases, there certainly are changes in the grey matter of the cord; so, it may be, similar or analogous may at times be recognizable in cases of multiple neuritis from alcohol. Changes of this nature have actually been described by d'Oettinger and Korsakoff, and by Finlay and Sharkey, and the author points out the probability of such changes occurring especially when the symptoms of muscular weakness and wasting with localized pain are confined to the region of distribution of a certain nerve or plexus of nerves. And even if changes in the cord are not recognized, it does not follow that they are not present, for it may be that changes do exist which by our present methods are still unrecognizable. A curious fact in this connection is that mentioned by M. Raymond, who produced artificially a slight degree of myelitis in animals, the symptoms of which soon disappeared. When the animals were killed a year or eighteen months later examination could reveal no trace of the original myelitis, but the nerves in connection with the injured segment of the cord were not unfrequently found to have undergone profound alteration.—*Lancet.*

A FIVE YEARS' MEDICAL COURSE.

The Medical Council of the College of Physicians and Surgeons of Ontario recently passed the following resolution: "On and after July 1, 1892, every student must spend a period of five years in actual professional studies, except as hereinafter provided, and the prescribed period of studies shall include four winter sessions of six months each and one summer session of ten weeks; the fifth year shall be devoted to clinical work, six months of which may be spent with a registered practitioner in Ontario and six months at one or more public hospitals, dispensaries or laboratories—Canadian, British or foreign—attended after being registered as a medical student in the register of the College of Physicians and Surgeons of Ontario; but any change in the curriculum of studies fixed by the Council shall not come into effect until one year after such change is made."

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Clinical Lecture.

EXOPHTHALMIC GOITRE.—TWO CASES OF HEMIPLEGIA—RHEUMATOID ARTHRITIS.

BY JAMES TYSON, M. D.,
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Delivered at the Hospital of the University of Pennsylvania.

Gentlemen:—We have in the wards a case of exophthalmic goitre which presents the essential symptoms of this affection in such a typical manner that I am glad to have the opportunity of showing it to you. Even at a distance you will see the characteristic symptoms and those from which it derives its name. The exophthalmos is very striking and the goitre equally so. The patient was admitted to the Hospital two days ago. He is a married man, 38 years of age, and groceryman by occupation. When a child he had scarlet fever, chicken pox and mumps. When seven years of age he had mild attacks of chorea which recurred frequently until he was thirteen years old. This is an important point in his history. He states, that his arms twitched more than his legs and that the right arm twitched more than the left. His head did not shake at all. In other respects he was well and strong until the age of 32 years and for nineteen years was able to work daily. When 32 years old he had as a result of over-work, bad drinking-water during the summer, etc. an attack of diarrhœa. He had diarrhœa every alternate week for six weeks averaging five movements a day. During these six weeks, however, he worked as usual. Since then he has had frequent attacks of diarrhœa lasting from one to four weeks. For the past five years he has had a severe attack of vomiting each year. Now, every time that he has an attack of diarrhœa, it is accompanied with vomiting. From the age of 32 to 36 years, he was well, with the exception of the diarrhœa above noted. Ten years ago he had a severe cold lasting three months and with this had muscular rheumatism affecting the arms and legs.

The present illness began two and a half years ago, he thinks as the result of catching cold. He had severe pain in all his joints both large and small, but the hip and knee-joints were the worst. The joints were neither red nor swollen. He was in bed six months with this attack and during most of the time had high fever. Since then, he has had successive attacks of rheumatic troubles in the joints. He first noticed swelling of the neck after he had recovered from the attack of rheumatism two and a half years ago. He never noticed that the eyes protruded more than those of other persons and therefore we can not determine when this began.

There is one other essential symptom of exophthalmic goitre and that is frequency of the pulse. The patient's pulse at present is only 96 per minute. When I counted it in the ward a few minutes ago, it was in the neighborhood of 150. It was so frequent and so irregular that I at once ordered him fifteen drops of the tincture of digitalis. This has had the effect of bringing the pulse down to 96. He therefore has this third and characteristic symptom of exophthalmic goitre, the frequent pulse. You will observe also that the goitre is the seat of an impulse. This is quite common in this disease where the goitre is of large size but it is not peculiar to the goitre of exophthalmic goitre.

On previous occasions I have spoken to you of what is known as Graefe's sign which is put down as characteristic of exophthalmic goitre. In the last three cases that I have shown you, this sign has been absent and it therefore cannot be said to be essential. This sign as you know is a want of synchronism in the dropping of the eyelid and the ball as the latter is rotated downwards. Here the lid goes down as rapidly as the ball. Our

own experience then is that Graefe's sign is by no means constant.

The essential symptoms of this condition are exophthalmos, goitre and frequent pulse. We may, however, have other associated symptoms. These patients are often nervous and choreaic and there is certainly a close relation between chorea and exophthalmic goitre, that is, you often find that patients who have exophthalmic goitre have had chorea at some period. This is particularly so among women. The chorea sometimes continues in association with the exophthalmic goitre. At other times it disappears on the appearance of the latter affection.

There is often a cardiac murmur associated with this disease but I think that, as a rule, it may be regarded as a result of the same cause rather than a part of the symptomatology of the affection. We have in this case a soft but easily heard systolic murmur heard best at the apex but also faintly heard at the base.

I may now say a word as to the etiology of the affection. In two of three cases which we have recently seen there has been a history of rheumatism, and rheumatism is put down as one of the best recognized causes of exophthalmic goitre. There are other causes of the disease but not so well determined. One of these is simple fright, (especially in women) anxiety, unhappiness and long-continued wretchedness, are responsible for a certain number of cases of this condition. Furthermore, fatigue and overwork may lead to the same disease. Then as I have already said, chorea is liable to precede this disease, but I would not say that it is a cause, but rather that they are both the result of the same cause. Chorea is rather inexplicable in a large number of cases. It is more common in children and in females. We know very little of its pathology. It has been thought that in some of the uncontrollable, obstinate cases where the patient is in constant motion, that there was a lesion of the blood vessels of the brain, but the morbid anatomy is very imperfectly determined. In the mild cases, there is no morbid change noticeable. It would seem that the cause that brings about the chorea is more or less responsible for the exophthalmic goitre.

At a previous lecture I dwelt upon the explanation of the symptoms and it is not necessary to devote much time to this on this occasion. It is plain that there is something behind the eyes pushing them forward. The most reasonable cause is hyperæmia of the blood vessels as a result of which they become swollen and the eyes are pushed forward. This hyperæmia must be brought about by the action of the sympathetic as a result of which the tone of the blood vessels is relaxed. This most likely is of the nature of a paralysis. The same explanation would apply to the hyperæmia of the vessels of the thyroid gland. In addition to the increase in the quantity of blood there is a true hyperplasia of the connective tissue and probably of the gland tissue itself.

In the treatment of this affection one of the first indications is to remove the cause if that can be done. The debilitated condition of the patient must be relieved. He must be properly nourished and the blood renewed and for this iron and arsenic fill a useful purpose. In the next place the use of remedies to relieve the symptoms must be considered. One of the best of these is digitalis. You have seen in this case the good effect of even one dose of digitalis. Every case of exophthalmic goitre should receive more or less continuously, as indicated, digitalis. Let me here impress upon you one condition of its successful use and that is that it be intermitted from time to time. Digitalis loses its effect when long continued. I have no fear of the cumulative effect of digitalis and I am doubtful whether such a condition exists. However, to get the best results from digitalis we should suspend its administration from time to time. The dose should gradually be reduced to nothing and then stop it for a time. Strophanthus may be substituted. While this is not so reliable as digitalis, it is an excellent remedy. It must however be given in larger doses than were at first recommended. We may begin with five drops, soon increasing to ten. As these patients are often nervous and irritable, bromide of potassium is useful in connection with digitalis. Under the use of these remedies, in association with proper hygienic conditions, I have seen the prominent symptoms in the course of time disappear. While it is doubtful that the symptoms will ever disappear completely in a case like this, it is likely that they will cease to be so conspicuous and that the patient will not be annoyed. I think that in a short time I shall have the pleasure of showing him to you in a much improved condition.

TWO CASES OF HEMIPLEGIA.

About a month ago, I showed you two cases of hemiplegia and made some remarks upon the etiology of the condition. The most interesting feature was the distinction between the form in which the face is par-

alyzed on the opposite side from that of the limbs and that in which it is paralyzed on the same side. In the majority of cases, the paralysis of the face is on the same side. That was the condition in the two cases which I showed you. We therefore concluded that there was a lesion in the motor tract above the decussation of the motor fibres, but exactly what that lesion was we were not prepared to say, although we thought it probable that in both cases it was hæmorrhage. It might be a syphilitic tumor or some other morbid growth. From the suddenness with which the symptoms developed we were inclined to believe that it was of a hæmorrhagic character. I bring the two patients before you in order that you may note the progress. In both the paralysis was on the left side and about equally bad.

You will recall the treatment which we directed in the case of this colored man, 66 years of age. We put him on a purely expectant treatment, so far as drugs were concerned, with massage and electricity. There has been marked improvement in his case. He can now move his arm and leg which he could not do when admitted. He is still improving, but how much better he will get I cannot say. We conclude that the clot is being absorbed and that the pressure which it makes on the nerves of the motor tract is being lessened. In almost every case of paralysis from a clot, there is improvement in the motor symptoms if the patient lives more than a few hours. This results from contraction of the clot which always occurs within a few days. This has nothing to do with the improvement which occurs later from the absorption of the blood.

The second case is a woman, aged 44 years. She has not improved so much. We placed this woman also on massage and electricity, and in addition gave her iodide of potassium with the hope of promoting absorption of the clot. Notwithstanding we did more for her than for the man, there has been less improvement. The face is not drawn as much as it was at first and she can raise her head which she could not do before.

The obstinacy of the symptoms in a woman comparatively young, makes me think that the lesion may possibly be something other than a blood clot. The most likely one would be a gumma or syphilitic tumor. I must say, however, that there is nothing in the history pointing to specific disease, but in a woman of her social position the suspicion is warranted. In paralysis from a clot in a person of this age, we certainly should expect more improvement than has taken place. I shall therefore treat her with this idea in mind. I shall at once put her on large doses of iodide of potassium, gradually increasing until she takes one drachm three times a day.*

RHEUMATOID ARTHRITIS.

I have here another patient whom you have also seen. It is a young girl with rheumatoid arthritis, whom Dr. Pepper showed to you two months ago. It is encouraging to be able to show a case like this, in which there has been considerable improvement, for the prognosis is apt to be unfavorable. When before you two months ago she was anæmic, and emaciated with almost no power of movement of the legs. The ankles were much swollen and the feet somewhat involved. The joints of the fingers were particularly affected. They were swollen and their movements much restricted. The skin was glossy and rather red. The fingers are still swollen, but she has less pain. She is now able to walk about the wards. What we fear in these cases is anchylosis and fixation of the joints. This can, to a great extent, be guarded against by passive motion. The pain of the treatment is apt to interfere with its employment, but we should not be influenced too much by this consideration, but insist upon passive motion and massage. The results of such treatment is often astonishing.

The patient has been taking four grains of antipyrin, and six grains of sodium salicylate three times a day. She has had also five grains of carbonate of lithium three times a day. She has taken emulsion of cod liver oil, a drachm and a half three times a day. With this, she has had massage and a passive movements. Looking at the patient and wondering whether anything more can be done for her, I think that one can not fail to be struck by her pallor, which indicates the need of iron. I think, therefore, that it would be advisable to add iron to the treatment. I should be disposed to omit the antipyrin and salicylate to determine how much of the improvement is due to them, and substitute a preparation of iron. There is nothing more suitable than Basham's mixture. I have been in the habit of employing the following formula

*Under this treatment, which with intermissions was well borne, improvement was more rapid, and at this time, August, 1891, she is able, with a little assistance, to walk in the ward.

which is satisfactory and makes a clear mixture:

℞ Tr. ferri chloridi.....f℥ss.
Potassii acetatis.....℥ij.
Elix. simp., q. s. ad.....f℥iv.
Sig. A teaspoonful two or three times a day in water.

One grain of sulphate of strychnia might be added to this mixture with advantage.

COMMUNICATIONS.

A CASE OF SKIN GRAFTING.

BY HORACE M. DARLING, M. D., LL. D.
CORNING, N. Y.

In December, 1890, Mr. C., a brakeman of the Fall Brook R. R., had his hand entangled by his mitten in the bumpers of two freight cars while making a flying coupling, whereby the hand and forearm are crushed, necessitating amputation. My brother, Dr. Louis Darling, operated, excising the hand and about three-fifths of the forearm. He found the fleshy part of the flap considerably bruised, but was compelled to use it, or to amputate it above the elbow joint. This amputation, though protracting the healing, leaves a longer stump and materially facilitates the adjustment and utility of an artificial hand and forearm. As was anticipated, a portion of the flap sloughed and the muscles above the point of cutting also had suffered in the severe squeeze by the car bumpers, and suppurated beneath the skin. An incision let out the pus, and the parts under aseptic dressings and applications progressed slowly to healing. In due time all healed save one extensive corner of the stump. The skin had sloughed away and none was left wherewith to facilitate growth and covering of the end of the bone.

I had charge of the dressings after the operation, and we had concluded to excise the end of the bone, and thus get covering, but my patient was a jolly, hardy son of Erin, and, as one day I talked of grafting the open wound, he fell into rapport with the idea and submitted to the trials.

I intended first to try a piece of sheepskin, but the sheep spoken for didn't come, and when I arrived he and his friends were terribly disappointed, for they were tired of the delayed healing. Jokingly I asked for a chicken. Well, it was quickly caught, and then, of course, I was compelled to do something, and I did. I cleaned the wound, touched the surface with the point of the knife, and while slightly bleeding, I excised pieces of skin from under the wing of the chicken and applied it at three points on the raw flap. The wound was dressed and left for 24 hours. When I next saw it, the grafts had rolled up, and two had been swept off with the discharges; the one was still slightly adherent. I dressed the stump, leaving the one graft *in situ*. Two or three days afterwards, I again dressed the wound, but unfortunately the attendant had, in washing away the discharges, inadvertently removed the graft. These grafts had been cut from under the wing of a young chick, and were very delicate, too delicate, I thought, so I directed a full-grown hen to be caught and from under her wing I cut two grafts about the size of ten cent pieces, and accurately applied them to the open surface, allowing the upper one to touch the real skin, and placing the other one in the center of the raw surface, then dressed the wound antiseptically, and gave instructions to leave all as it might be until I saw it the next day. The following day I found the grafts adherent, seemingly agglutinated underneath to the wound. I cleansed the wound and dressed it antiseptically. The second day following I found the graft in the center had produced a point—a *nidus*—which appeared covered with a smooth something. The graft next the skin also appeared to be fast and the discharges much lessened around it. They were dressed as before, and on my next visit the center graft had disappeared, but a *nidus* remained. The graft close to the skin had partially gone but in its place there was a perceptible glossing over, the surface looking something like a collodion covering. The center spot, at a subsequent visit, had not developed but had entirely disappeared. The other graft, or the spot where it had been, progressed favorably and the skin—very thin at first—extended out into the raw surface. The discharge lessened and this point grew more and more in skin covering. I again grafted on other parts of the sore, fresh grafts cut from the hen, and again points formed, from which coverings spread. Thus this large raw surface, freely discharging, was covered with a new growth, the discharges lessened, and isolated scabs soon formed, which, when removed, left a *quasi* skin. The scabs formed from time to time and were removed. The surface I then dressed with vaseline and kept it lubricated until now it is entirely covered and has been covered without any discharges or scabbing for a month, the covering assuming more and

more the characteristics of skin. Once, since this skin formed, a small abrasion was produced by his shirt; this refused to heal for a time, but after repeated applications of the stick *argenti nitros* it has healed, and the entire stump is well covered. The covering is purplish, but day by day assumes more and more the appearance of the skin.

I can not say that the grafts adhered and grew, or were absorbed or discharged, but I can say that at and from the places where the grafts were placed there appeared a natural covering which remained and extended and became skin, while the places of the open surface, where the grafts were not put and around the graft's *nidus*, the surface was coverless and discharging. From day to day the *nide* could be seen extending out into raw places and the wound thus covering over.

I had before this often on large raw surfaces, or extensive ulcers, placed pieces of this or that animal's skin, cut from a tender part, and though not adhering or growing they frequently seemed to change the condition of the surface favorably, and promote the growth of covering, sometimes permanent and sometimes to break out again.

In this case there is no doubt that the grafts were of invaluable service in promoting the growth of skin on the stump.

BILATERAL FACIAL PARALYSIS, WITH REPORT OF A CASE.

BY M. IMOGENE BASSETTE, M. D.,

INSTRUCTOR IN NERVOUS DISEASES IN THE PHILADELPHIA POLYCLINIC.

Double facial paralysis, and all forms of bilateral cranial paralysis, are comparatively rare. In an experience of nearly four years in the department for nervous diseases at the Philadelphia Polyclinic, the case which will be reported in this paper is the first of double facial palsy that has come to the service, although unilateral cases have been common. A few cases of other types of bilateral cranial paralysis have been observed, but always as parts of more general affections, as of ophthalmoplegia, bulbar paralysis, or progressive muscular degeneration. Bilateral facial paralysis, and bilateral cranial palsies in general may be peripheral, nuclear or cerebral; and the differential diagnosis of these three forms, sometimes an important practical matter, will be considered after the presentation of the case.

S. G., aged 33, was married and had had three children, and also three miscarriages, but denied any knowledge of syphilitic infection. She followed washing, ironing, and house cleaning for a living, and therefore was much exposed to wet and cold. Four years ago she had a severe attack of sciatica for about six weeks. Three months before coming to the service, after becoming thoroughly drenched in a rain, she was attacked with pains and soreness, which were at first general, but finally settled in the muscles of the chest, and remained there about two weeks, then leaving appeared in the right side of the head, and in the ear and face. Two days before this she had constant twitching of the right corner of the mouth and of the right eyelid. She had a sensation as if her head was divided in the middle from the chin to the nape of the neck. As soon as the pain commenced in the head she had sensitive lumps or "kernels" behind her ears. A week later she was completely paralyzed on the right side of the face; she was unable to close her right eye or wrinkle her brow, and her mouth was drawn to the opposite side. Two weeks after the appearance of this paralysis she began to have pain of the same character, but more intense on the left side. She now had great difficulty in masticating her food, owing to the inability to close her mouth, and was obliged to use liquids chiefly. From the first she had some blunting of taste. Her hearing was not affected until the left ear became involved, when she soon had complete deafness on this side.

When she came under observation at the Polyclinic, about a month after the first attack of paralysis, she had almost complete bilateral facial paralysis. She still complained of pain on the left side, but it was not so severe as at first, and her hearing had in a measure returned but was still much impaired on the left side. She continued to have trouble in chewing on account of the inability to close her mouth; and speech was much affected owing to difficulty in moving her lips. She could protrude the tongue and move it in all directions. Careful testing showed complete loss of taste on the anterior surface of the tongue on both sides, and this was accompanied by great dryness of the mouth. Double lagophthalmus was marked; she could not wrinkle the forehead, dilate the nostrils, raise the lips, or draw the angles of the mouth upward or downward. She was obliged to

place her hands against and around her lower jaw and cheeks in eating so as to prevent the food from falling out of her mouth; she also had some difficulty in swallowing, and was obliged to throw her head far backwards to assist in this act. She was carefully tested for touch, pain and temperature on the tongue, face, and mucous membrane of the mouth, and these senses were found to be not impaired. Smell was impaired on both sides, but was not lost. She complained of noises in the left or partially deaf ear, which she compared to the falling or crunching of ice.

The muscles would not respond to the faradic current, but on careful testing with the galvanic, reactions of degeneration were found to be present on both sides, more advanced on the left.

The patient has continued to report at the Polyclinic service for nervous diseases, up to the time of writing, a period of two months. She has made considerable improvement, much more decided on the right than on the left side. At first small blisters were applied in front of and below the ears, and she was given small doses of mercury. After a few days salicylate of sodium and gaultheria were given, under which the pain subsided, and later her internal treatment was chiefly iodide of potassium, in doses of 10 to 20 grains. Strychnia and quinine have also been used, and the galvanic current has been applied three times a week.

When last examined, the deafness and tinnitus of the left ear had entirely disappeared. She could nearly close the right eye, and the left much better than at first; the right angle of the mouth could be well drawn upward, and on the right side the lips could be elevated and depressed. She had no difficulty in swallowing and but little in chewing. In general the improvement on the right side of the face might be set down as equal to one half of the loss, while on the left side the paralysis was still very decided but improving. Reactions of degeneration were marked on both sides.

The appearance of the face in this case, as in all cases of complete bilateral facial paralysis, was very striking. It presented an immobile, mask-like look, which was entirely uninfluenced by strong emotion.

The consideration of the nature and causes of cases of this kind is of practical interest, because both prognosis and treatment must depend upon the etiology and special pathology of the case. Speaking with reference to the location of the lesion we may have three forms of bilateral as well as of unilateral facial paralysis, namely, a peripheral, a nuclear, and a supra-nuclear or cerebral form. Under peripheral would be included all cases due to gross lesions affecting the portio dura or its branches, anywhere from the superficial origin of the nerve to its terminal expansions. These lesions may therefore be intra-cranial, intramural that is, within the Fallopian aqueduct, or entirely extra-cranial. The ma-jority of the peripheral cases reported have been due to lesions, in part at least, in the Fallopian canal. Not a few have been associated with disease of the middle ear, mastoid cells, or temporal bone. Several bilateral cases in patients suffering from double otitis have been reported. Cases have also been recorded due to intra-cranial tumors, as growths of the pons or in the floor of the skull, and also others dependent on localized basal meningitis.

The peripheral extra-cranial form of bilateral facial palsy is a rare variety of a rare affection, but Gairdner,[1] in the *Lancet*, has reported an interesting case of this kind. The case was apparently rheumatic, due to exposure. Although bilateral it was incomplete. It involved most, but not all the external branches of the portio dura; but the petrosal, the chorda tympani, the auditory, and the nerve of Jacobson, and all the branches connected with the sympathetic nerves were not involved, showing that the disease was entirely outside of the stylo-mastoid foramen. The patient had some power over the occipito-frontalis muscles, and even over some of the muscles of the ear which in health are not usually under the control of the will. The buccinators were almost completely paralyzed. Gairdner made some observations in connection with this case on the involvement of different muscles of articulation. The defect in articulation was almost entirely limited to the labials. Although formidable in appearance, this case was amenable to proper treatment, and made marked progress under the use of galvanism, exercise of the muscles, counter irritation, and iodide of potassium.

Bilateral nuclear facial paralysis as an isolated affection is extremely rare, and I have not been able to find the record of such a case. Congenital cases of bilateral paralysis of several cranial nerves, including the facial have been reported. These have been attributed to lack of development of the nuclei of various cranial nerves, and have

[1] Gairdner: *Lancet*, London, May 18, 1851.

been called by Schapringer[1] cases of "bilateral pleuroplegia." Such nuclear cases are not always congenital, but sometimes come on in progressive degenerative diseases which invade both the cranial and various spinal centres. Cases, for instance, have been reported associated with progressive muscular atrophy. The ordinary type of glosso-labio-pharyngeal paralysis, eventually becomes bilateral, but does not usually present at an early period striking bilateral phenomena. Cases of complete double oculo-motor paralysis, and of ophthalmoplegia both externa and interna, have been reported in considerable numbers, and in some of these spinal centres have been involved, although the cranial nuclei between the oculo-motor and cervical regions have escaped. Mills[2] has reported such a case of complete double oculo-motor paralysis associated with which was advanced paralysis and atrophy of both upper extremities.

The third form of double facial paralysis, the supra-nuclear or cerebral, is that which arises from double lesions situated above the nuclei in the pons and medulla oblongata, that is, in the facial centres of the cerebral cortex, in the great ganglia, or in the facial tracts connecting the cerebral centres with the cranial nuclei. Two lesions of considerable size must be present in similar locations one on each side of the brain, and this occurrence is not likely, but cases have been reported.

This case without doubt, belongs to the class of peripheral facial palsies, and the lesions are in part, at least, situated within the Fallopian aqueduct.

A peripheral facial paralysis, unilateral or bilateral, usually has a more or less acute onset, and a definite traceable cause. In the case here reported paralysis was preceded by what appears to have been an attack of diffuse muscular rheumatism, without any articular trouble. It is not impossible that syphilis may have been a factor in the case, but a specific history could not be obtained. The paralysis appeared upon the right side of the face, much as cases of rheumatic or syphilitic facial paralysis usually originate; the left sided paralysis followed the right within two weeks, and both presented similar characteristics, differing only in extent. That hearing on one side was lost and on the other retained, was in favor of peripheral as contrasted with nuclear disease, as the latter is usually uniformly bilateral. In favor of peripheral disease was also the occurrence of paralysis in the distribution of those nerves which are in contact with the portio dura, or form communications between it and other nerves, in other words, the chorda tympani, the petrosal, and the auditory. In a cerebral case these nerves are not involved, and in nuclear disease only when the lesion is extensive or multiple, including other centres than the facial.

A good practical point of distinction between a peripheral and a cerebral facial paralysis, especially when unilateral, is the completeness of the paralysis in the former. In a cerebral case the paralysis which remains prominent is usually of the muscles which are supplied by the branches of the lower part of the face; the frontal and orbiculo-palpebral muscles usually recover so fully that the palsy does not attract attention although a minute study of the movements of the muscles will show some weakness. Even in a double facial paralysis this distinction may be of some value, but probably, as in a case of double cerebral lesion, the psycho-motor centres or tracts for the face are destroyed on both sides, and one side is not left to act for both, some paralysis of all the muscles of the face will be present in the upper as well as the lower distribution of the portio dura.

The completeness of the paralysis—and the involvement of the upper as well as the lower fibres of the facial—is not against nuclear disease, but complete nuclear paralysis comes on late, after long-continued degenerative processes, and not suddenly or rapidly as in peripheral cases. Nuclear paralysis, which is usually bilateral—of the facial, abducens, oculo-motor, or other type—as a rule, if not congenital, comes on insidiously, the muscles gradually weakening and wasting, and commonly without a preceding history of rheumatism, injury, ear disease, tuberculosis, or other cause of gross lesion. As already stated, both sides are likely to be attacked uniformly, although this is not always the case. It is rare, but not unknown, to have nuclear disease confined to the cell-cluster connected with one set of nerves; it is especially rare to have the facial nuclei alone attacked.

In cases of extensive peripheral neuritis or peri-neuritis—the reflexes are abated or abolished, and in this patient the palpebral reflexes were diminished, and the muscles of the face and the uvula and soft palate were irresponsive. These tests would help

[1] Schapringer: *Medical News*, March 1, 1891.

[2] Mills: Trans. College of Physicians, Philada. Third Series, Vol. vi, 1883, p. 433.

to separate the case from both nuclear and central facial paralysis. In cerebral cases the reflexes are unaffected; in nuclear cases they may be increased until the disease has nearly destroyed the facial nucleus, or the curious phenomenon known as crossed reflex action may be present. With reference to this, Erb [1] speaks as follows: "Benedict has laid great stress upon the occurrence of unusual, and especially upon decussated reflex actions, as a means of diagnosticating the seat of the disease in the neighborhood of the facial nucleus; but reliance is only to be placed upon them when all precautions have been taken, especially to avoid diffusion of the current when electrical irritation is employed. If this be done, we are justified in admitting the presence of a disease of the gray substance in the neighborhood of the facial nucleus." Both the direct and the crossed reflex action were absent in this case.

The electrical examination is always of importance, and may at once settle the question of diagnosis, as between the peripheral, the nuclear, and the cerebral form. Most cases of peripheral facial paralysis give typical degeneration reactions. In the majority the paralysis is either complete or at least complete so far as the extra-Fallopian branches are concerned, and in these the nerve being completely compressed, all the changes, modal and serial, of typical reaction of degeneration will be present. In a few light forms, as Erb and de Watteville have pointed out, the reactions to both currents remain nearly or quite normal, and in a medium or middle form of the affection partial degeneration reaction may be present. These, however, are not common, and, as a rule, the presence of a partial degeneration reaction would point to a nuclear disease, and a normal electrical response to a cerebral lesion. Erb and de Watteville have shown that in the chronic degenerative diseases such as amyotrophic lateral sclerosis, progressive muscular atrophy, bulbar paralysis, and the more or less isolated nuclear affections, the partial degeneration reaction is the rule. The modal and serial changes in the present case indicated true peripheral disease.

Supra-nuclear facial paralysis, that is facial paralysis from disease of the cortex, the ganglia, or the cerebral tracts, would be most likely to be due to multiple lesions, as tumors, abscesses, hæmorrhages, or emboli sms, and would therefore probably have the general symptoms of these affections. Occasionally such cases originate from injuries to the head causing fracture or hæmorrhage on both sides of the head, or fracture on one side and hæmorrhage on the other. After a study of the history and general symptoms, and the special symptoms as detailed, the diagnosis would be completed by remembering that in cerebral cases all degeneration reactions are absent.

The exact site and extent of the lesion on each side in such a case, has some bearing on the prognosis and treatment. The lesions on both sides have undoubtedly invaded the Fallopian aqueduct. With reference to such lesions, Althaus [2] has divided this canal into three parts, 1, a first or external section, which is below the origin of chorda tympani; 2, a second or middle section, which includes the chorda tympani and the stapedian nerve, and 3, a third or internal section, which embraces the geniculate ganglion, where the large petrosal nerve is given off, and also near at hand the small and external petrosal. In addition to the nearly complete paralysis of all the muscles supplied by both facial nerves after their exit from the stylo-mastoid foramen, the patient had similar, but not exactly identical symptoms. She had complete abolition of taste on the anterior extremity and sides of the tongue, showing that the lesion on each side involved the second or middle section wherein runs the chorda tympani. The third or inner division of the canal was also probably reached on both sides. The uvula was not deflected, but the velum palati drooped on both sides, and the palate did not respond well to electrical or other excitation. The uvula did not deflect probably because the paralysis was on both sides. One symptom, deafness, indicated a more extensive lesion on the left side than on the right. This deafness, which improved, was associated with decided tinnitus. The most reasonable explanation for its presence is that the inflammation of the facial nerve and its sheath extended inwards on this side sufficiently far to involve the auditory nerve by contiguous inflammation or by pressure. The Fallopian aqueduct begins at the bottom of the short canal which leads inward from the internal auditory meatus, and in this canal the auditory and facial nerves are in company, so that a purulent or other inflammation extending backward along the facial might reach and involve the auditory. The patient had not on either side that hyper-sensitiveness of hearing which sometimes indicates paralysis of the nerve to the

[1] Erb: Ziemssee's Cycl. Pract Med. Am. ed., Vol. xi, p. 501.

[2] Althaus; Brain, vol. ii, 1879, p. 24.

stapedius, but this is generally absent or obscure when the lesion extends to all the sections of the Fallopian aqueduct.

Facial paralysis has afforded some interesting facts in connection with certain physiological problems. The anatomical relations and functions of the chorda tympani nerve have frequently been a subject of discussion, and cases of double facial paralysis in which by close study, the exact sites of the lesion has been fixed have assisted the final decision with reference to this nerve. In two papers by McDonnell [1] and Nixon, [2] which record interesting cases of double facial paralysis, the physiology of taste and the distribution of the chorda tympani have been discussed in connection with the phenomena presented.

The nerve supply to the tongue includes the trunks or branches of the hypo-glossal, the lingual or gustatory, which is a branch of the fifth, the chorda tympani, and the glosso-pharyngeal nerves. One question which has proved a fruitful subject of investigation is as to the measure in which certain of these nerves are concerned with taste. The hypo-glossal nerve is purely motor, but at a certain part of its course it communicates with the gustatory nerve. The glosso-pharyngeal nerve is a special nerve of taste to the tongue, but it is not distributed to all parts of this organ. The chorda tympani nerve is undoubtedly distributed to the tip of the tongue, but owing to its meandering course and complicated relations it has been difficult to decide as to its origin, its independence, or if not independent, of which great nerve it is a part.

In the present case the sense of taste was carefully tested, and was found to be totally abolished on the anterior extremity and sides of the tongue. She complained at first that everything she put into her mouth tasted like tallow; later the taste of articles improved, but at the time of the last examination, after a lapse of two months, taste was completely abolished on the distribution of the chorda tympani on the tongue.

As it is important to have a clear and precise method of studying the impaired functions in a case of this kind, it might be well to give the methods which were employed in testing for touch, temperature and taste, and for the secretion of saliva,—which were the same as those described in McDonnell's paper. The tongue was touched lightly with the finger, a feather, a camel's hair brush, and other light objects, and was tested with the double points of the æsthesiometer, the patient correctly and readily recognizing the impressions. The temperature was tested by touching the tongue with cups filled with water slightly differing in temperature; with her eyes closed the patient could at once distinguish a difference of only a few degrees. Solutions of sugar, citric acid, salt and quinine were made in gum mucilage, and "sweet" "sour," "bitter," and "cannot tell," were written on a slip of paper and the patient was directed after the solutions had been applied to the tongue to answer before withdrawing the tongue into the mouth. She could not perceive the electrical taste when the poles were applied to the tip of the tongue. The effect of testing for the secretion of saliva can be best described in the words of McDonnell in recording the experiments made upon his patient and upon a healthy individual, as the results were the same: "The secretion of saliva excited by the application of sapid substances to the forepart of the tongue was in abeyance. The comparative observations made on this point were very striking. The patient and one of the students were placed sitting with their mouths open and their tongues raised to the roof of their mouths, so that one could see in beneath the tongue within the incisor teeth; a camel's hair brush dipped in lemon juice was then passed over the tip and edges of the tongue; in the healthy individual in less than half a minute, the hollow beneath the tongue became filled with saliva, which dribbled over the lip, while in the patient no saliva could be seen welling up."

So far as the determinations with regard to taste in this patient were concerned, they were simply in confirmation of the facts which have been noted in the majority of cases both unilateral and bilateral in which the lesion reached the middle portion of the Fallopian aqueduct. No positive light is thrown by such cases on the question of the origin of the chorda tympani, either from the facial, glosso-pharyngeal or fifth nerve. They show, however, that this nerve is undoubtedly in contact with the facial in the canal.

One view with reference to the chorda tympani nerve which has much in its favor is that which has been held by Scarpa and others, that it is a distinct cranial nerve with a separate nucleus in the floor of the fourth ventricle. Nixon holds that in accordance with general analogy it is most likely that we have only one great nerve of taste, as of sight, smell, and hearing, and this is most

[1] McDonnell: *Med. Chir. Tr.*, London, 1875, 2. s, xl. 369–375.

[2] Nixon: *Dublin Jour. Med. Sci.*, 1876, l xi, 105–112.

likely the glosso-pharyngeal. He believes that the difference in taste as determined by the anterior and posterior areas of the tongue, depends upon the dissimilarity of the structures of the two regions and the closeness of the base of the tongue to the organ of smell, and that probably the chorda tympani nerve rises from the glosso-pharyngeal, joining or communicating with the facial in its course. The glosso-pharyngeal is well known to be connected with the facial by two or three routes, as by the tympanic plexus, or by the communicating nerve between the facial and glosso-pharyngeal.

As already stated observations on cases of peripheral bilateral facial paralysis, like the one here considered, show that the nerve in its course is in contact with the facial, but threw no light on the origin of the chorda tympani. Some of the nuclear bilateral cases, however, would seem to indicate that the chorda tympani is a distinct cranial nerve with its own nucleus, or that it is a part of the glosso-pharyngeal. Harlan[1] and Keen[2] have reported a case of congenital bilateral paralysis of the 6th and 7th nerves. The absolute bilateral and congenital absence of function of the 6th and 7th nerves, without, as was the case, any involvement of the chorda tympani, according to Keen, pointed clearly to defective development of the nucleus common to the 6th and 7th nerves, and tended to confirm the assertion of Sappolini that the chorda originated from a distinct nucleus as a thirteenth cranial nerve.

Severe as a case like the one reported here is, great improvement can be hoped for from judicious treatment. Those cases in which the lesion was situated beyond the stylo-mastoid foramen offer of course a more favorable prognosis, but the double as the unilateral cases of facial paralysis even when intra-Fallopian sometimes recover and when a complete cure is not effected may greatly improve. The behavior of the nerves and muscles in reference to electricity as the case progresses affords some basis for opinion as to complete or incomplete recovery. If the faradic and galvanic reactions show no sign of improvement after several weeks the case will only make a partial recovery. The best treatment is that which has already been indicated as having been followed in the present case: At an early period leeches or blisters behind, below or in front of the ear, small doses of mercury and sudorifics; a little later, the salicylates. Iodide of potassium may also be used, particularly if the case threatens to become chronic and to assist in nerve and muscle regeneration, strychnia and galvanism will probably prove most useful.

[1] Harlan: Trans. Amer. Ophtal. Soc. 1881.

[2] Keen: Trans. Coll. Phys. Phila., Vol. vi, 3rd Series, 1883, p. 434.

ACUTE INFECTIOUS JAUNDICE.[1]

BY STANLEY M. WARD, M. D.

SCRANTON, PA.

The existence of an acute systemic affection, having the characteristics of an essential fever with its usual accompaniments, attended likewise with marked and persistent jaundice, hæmorrhages from various mucous surfaces, more or less disturbance of the nervous system and of the gastro-intestinal tract, the pathology of which seems to be a catarrhal condition of the gall ducts with enlarged liver and spleen, is evidently not generally admitted. Having recently had occasion, because of a case of jaundice under my care presenting many anomalous symptoms—to look through such complete and recent works as Pepper's *System of Medicine*, and Keating's *Cyclopædia of Diseases of Children*, I could find nothing to enlighten me (the Annuals (Sajous) for 1889 and 1890 contained several pages beside references to Weil's disease—defined elsewhere as abortive typhus with jaundice"—). But beside these my search was unrewarded. My friend Dr. L. Wehlan, of Scranton, kindly put his library at my disposal, and I am greatly indebted to him for the copy of the *Sammlung Klinischer. Vorträgr* (September, 1890) containing the lecture of Dr. Hennig, of Königsberg, a translation of which constitutes a large part of this article. Dr. Wehlan also rendered me most efficient aid in the translating.

Case of the Author.—Fred. T., an inmate of the "Home," of this city, of healthy parentage, had not "seemed himself" for several days prior to my first visit on the morning of April 20th. He did not complain of anything particularly only of being tired. He had eaten no supper the night previous. Pulse 85, temperature 102½°, lungs and heart normal, throat within a little congested, tongue coated with a light fur, nothing known about his urine or fœcal discharges except that he was "cos-

[1] Read at the July meeting of Lack. Co. (Pa.) Medical Society.

tive." No diagnosis made. Ordered a "fever mixture" and small doses of calomel. The next day the symptoms were about the same, but he was nauseated and had vomited. Appeared utterly indifferent to everything. Jaundice appeared the next day and his temperature rose to 103°. Stools "pasty" and very offensive. Bowels constipated. In a few days a severe epitaxis took place. The buccal cavity became sore, and bleeding occurred often from the raw mucous surfaces. His breath had a sour odor and was very offensive. There was some nocturnal delirium. Liver and spleen were both enlarged. Urine contained bile-pigment and small quantities of albumen. Meantime the jaundice increased, though it never became that dark, greenish hue seen in malignant cases; he bled frequently from the nose and mouth, though I cannot state positively that the blood which came from the oral cavity was not from the posterior pharynx or at least from the mucous surfaces already mentioned, rather than from the stomach. Thus for over four weeks these symptoms continued. Jaundice fever of a remittent type—but twice during this time did I find a normal temperature—ranging from 100° to 103°, hæmorrhages, anuria, obstinate constipation, pasty stools, anorexia and malaise. Gradually the fever subsided, the jaundice decreased, the stools and urine regained their normal character and appearance, his appetite returned and convalescence ensued. Early in the boy's sickness he was taken away from the others, and but one child had access to him. I may state, whether there is a connection or not I will not say, that soon after Fred's recovery I saw the other child with what seemed to be an irritation of the gastro-intestinal tract. He was sick but a few days.

Dr. Hennig's Cases.—October 16th, 1889, I saw Erwin L., a strong boy, on account of a yellow discoloration of the conjunctivæ. The mother stated that the child had not been well since the ninth; and though he had been restless, tossing himself from one side of the bed to the other, had a poor appetite, was cross and had lost flesh, these symptoms had not alarmed her until on the 11th she noticed the yellow tint of the conjunctivæ. Examination revealed the following: Jaundice of the skin and conjunctivæ, tongue coated with a dirty fur, sickening odor of the breath, no eruption, lungs and heart normal, spleen not easily mapped out, slight increase of liver dulness, pressure on abdomen not painful, tympanitic abdomen painful on pressure, no tumor, sensation and motion normal, no cerebral symptoms, bowels a trifle constipated, stools a slightly bad odor and a little blue in color, urine somewhat scanty, of a dark brown color, s. q. 1023, traces of albumen only discoverable by the metaphosphoric and citric acid tests, bile-pigment, hyaline casts, epithelium, and a little pus likewise present. Temperature 101⅘°, pulse fairly good and rhythmical, 106 to the minute. Neither itching nor yellow vision present. He can distinguish colors and sees good at all times. The boy being affected with hereditary syphilis—the last outbreak occurring during the summer of 1889—I at first sought some connection between this and his present condition, although jaundice is rarely a symptom of hereditary syphilis (Furth). However, as there was no evidence of a new outbreak, not much enlargement of the liver and no roughness of the organ, I threw syphilis out and made a diagnosis of catarrhal jaundice instituting a suitable therapy. Having obtained excellent results from Henoch's prescription of HCL. acid, a suitable diet in "bilious" diseases and duodenal catarrh, I decided to use them in this case. The boy improved slowly under this treatment, sleep returned, he showed a disposition to play, and his appetite returned, nevertheless icterus of the skin and conjunctivæ continued, as did also bile-pigment, albumen and casts. Splenic dulness became more plain from day to day (no pain being complained of in that region), though not in proportion to that of the liver, (both organs being easily palpated). He bore these examinations impatiently and manifested pain where they were made. The only subjective symptom now remaining, was pain in the right hypochondrium and abdomen. On the 18th the stools were yellow, this being the first indication of an opening through the ductus choledocus. Jaundice now slowly disappeared, and on the 19th a polyuria occurred, urine sp. g. 1007. Pus and casts now disappeared and he was discharged on the 21st. Case 2.—Margaret, this boy's sister, aged 3½ years. She also had hereditary syphilis exhibiting the last symptoms during June, 1889. When brought to me, early in November, I found that she was disinclined to play, was the color of a "dried herring," had pains at the base of the brain, "bone breaking" pains in her lower limbs and tooth-ache which being worse at night caused her to sleep poorly. On the 7th, her urine was found to contain bile-pigment, pus, hyaline casts, pavement epithe-

lium, with white and red blood corpuscles, sp. g. 1021. She had icterus of the conjunctivæ and face. This little patient felt very bad. She wept and sobbed loudly, complained of the itching, pain in the back of the head, in the epigastrium and in the right hypochondrium. She winked a great deal,had trouble with her vision, photophobia and was much depressed. Her tongue was heavily coated, breath sour, diarrhœa, scanty, dark-brown urine, frequent pulse, 140, temperature 102½°, the fever attended with chills. Lungs normal excepting a slight catarrh of the right lower lobe, cardial dulness normal. The heart sounds could be heard distinctly alternately with the sounds from the large blood vessels. Liver dulness extended a finger's breadth below the edge of the ribs. Palpation of the organ was very difficult. It and the spleen were smooth. The slightest pressure on the tympanitic belly evoked screams of pain. Sensation and motion appeared to be normal. In this case also a diagnosis of catarrhal jaundice was made and a similar line of treatment pursued. But a few days afterwards, or on November 9th, I saw something which caused me to view this case from another stand-point and awakened in me a great degree of interest. It was that of a third child, three years of age, living up stairs in the same house, and said to be affected in the same way, with jaundice. The families being intimate, the mother, at my request, brought her child, Elsa, to me. Her skin and conjunctivæ were yellow,tongue coated white, pulse 128, respirations 24. She complained only of weariness. She had a good appetite, regular digestion with scanty, slightly whitish stool. Her sleep was normal. As happened, according to the report of my colleague, Dr. Herbst, in his cases, that the jaundice quickly disappeared under muriatic acid, suitable diet and purgatives, so it was in this little patient, who by the 23d, was restored to health, having, with one exception, spent but one day in bed. But in the second patient the disease pursued a different course, presenting the following symptoms: A high degree of jaundice remained in the skin until the 14th, the body was the color of a lemon, discharges from the bowels were scanty, bluish-gray in color and very offensive, the urine contained a great mass of bile-pigment, albumen over 1½ per mille, (Esberch's albuminometer,) quantities of casts and pus corpuscles. There was now and then anuria. The child had a severe fever, pulse full and very fast, remaining for some time at 140. As with all the cases observed, her delirium was worse at night. During the day the child sat here and there for a short time around the house or lay on the sofa, she complained and sobbed a great deal on account of the severe pain in her head and legs and on account of the intolerable itching. She was very unhappy and enjoyed absolutely nothing. Had severe thirst at times, winked a great deal, was extremely peevish and complained of pain in her eyes. She could see during the day, had the characteristic appearance of blue-blindness; in the twilight or at night she could not take a step, being unable to see at all. Ophthalmoscopic examination negative. November 15th, it was only by quite strong palpation that I was able to demonstrate the position of the liver. On the 16th, the discharges from the bowels lost their bluish cast and became of a lightish brown. On the next day the skin around the neck changed in color, the urine lost some of its bile-pigment, the disposition of the child was not so peevish and cross, and it began to take some interest in affairs going on in its room, the pulse fell to 120, stronger. The patient's appetite improved, she complained no more of pain in her abdomen and legs, and the pain in her head was also better.

With the permeability of the bile ducts the child's recovery proceeded uninterruptedly so that on November 20th further treatment was dispensed with. Case 3. During this girl's sickness, Kurst F., brother of Elsa, presented much the same symptoms as the other three children. For the particulars of this case I am indebted to my colleague, Dr. Herbst, whose account is as follows: Kurst F., five years old, was seen on November 14th, with a yellowish hue of the conjunctivæ. There was nothing complained of which pointed to indigestion as its cause. In a short time his skin likewise became jaundiced, fever was not present. He was around the house and cheerful all the time and had fully recovered by the 27th. Case 4. On November 1st, Mr. L., father of the first-mentioned children, was sick with fever and shaking chills, severe pain in the head, anorexia, soreness in his limbs and pain in the left hypochondrium and right epidymus. The scanty urine contained no gonnocci but was concentrated, had a sp. g. of 1023, and contained a mass of bile-pigment with albumen. Examination of the lungs showed a diffuse catarrh, splenic dulness increased, while the liver could easily be felt under the edge of the ribs. With rest in bed and ice to the inflamed scrotum, and purgatives, he was better the next day and on the fifth the whole scrotum was enveloped

in a mercurial plaster, and he left his bed to go on a journey with no feeling of weight or heaviness therein. During his entire illness there was very little jaundice, though on more than one occasion bile-pigment was found in his urine. The splenic dulness was normal on the third day but the liver was slightly enlarged at the last examination. Case 5. Finally, Mrs. L. was attacked on November 14th, with a shaking chill, great lassitude, dull pain in her abdomen and trifling hæmorrhage. She believed herself two months pregnant, though she was three months advanced. Although she was put to bed, on the 18th, she had a chill, heat and burning in her abdomen, with a severe hæmorrhage, which, during the course of the following day, became so severe that fears were entertained for the safety of the fœtus. Though the womb would admit the index finger and the fœtus could be felt it could not be seized. During the night bearing down pains came on, accompanied with hæmorrhage and the fœtus was passed during the act of urinating. The secundines were removed without hæmorrhage or trouble by manual expression, late the same night. The fœtus appeared normal, had no appearance of syphilis, and was not macerated. The placenta was large showing how far pregnancy had advanced. Sections of the child showed no pathological lesion. The membranes showed fresh ecchymoses. The lying-in was normal so that the patient was around by the end of November. Mrs. L. was slightly jaundiced the whole time but the discharges from her bowels did not have the characteristic color which marks an interference with the excretion of bile.

Dr. Theodore's Case.—On Nov. 11th, 1889, Kate, ten years old, the daughter of Professor D., was taken sick with catarrhal jaundice. Added to the jaundice there was fever, 102½°. The stools never dry, a little "costive" and light in color. Urine reddish-brown. After the second day the fever tended to become higher every other night. She was free from jaundice and dismissed from treatment on the seventh day. On the day of her dismissal, her sister Joanna, aged twelve, was attacked almost as she had been, except that the jaundice was more intense and the other symptoms less severe. She was under treatment twelve days. Three days after her dismissal, viz., December 3d, her brother George, aged eight, was taken sick with anorexia, fever, heavily coated tongue and constipation. My first idea that here was also a case of catarrhal jaundice proved correct, for he was jaundiced on the next day, his fæces became an ashen-gray, his urine reddish-brown and the skin yellow. On December 12th, this patient was convalescent. December 14th Ludwig, his two and a half year old brother was taken sick with high fever, coated tongue and diarrhœa. The hope that this too was a case of jaundice was frustrated. His temperature remained high while other symptoms were lacking. That this was a case of typhoid was soon proven by the appearance of the "spots." The course of the fever was free from any complication and he had fully recovered by the end of the seventh week. On December 24th his mother who had watched and nursed him for ten days and nights was attacked with typhoid and died early in January with intestinal hæmorrhage. But jaundice had not yet finished in this family for, on January 3rd, 1890, Martin, a six year old boy was taken sick in like manner and had the characteristic yellowish discoloration. He was sick but six days, his appetite and bowels remaining normal all of the time. Finally, Elsie, aged twenty-one, was taken sick January 20th with a mild attack of jaundice. Only one child Otto, aged four, and the father escaped. The treatment of all three cases consisted in the application of the faradic current to the gall bladder. No restrictions were placed on their diet and no medicines were used.

Epidemics of jaundice have occurred for many years in Europe, certain parts of Africa, in some of the Pacific islands and in America. Woodward, *Outlines of the Chief Camp Diseases of the U. S. Army*, mentions one during the year 1861 and 1862. The earliest one I found recorded occurred in Berlin in 1699 and Dr. Hennig records others as follows: Berlin, 1702, 1878; Paris, 1741, 1760, 1865, 1870, 1871 and 1872 with many more.

The cause of infectious jaundice seemed to be some agent developed outside the organism. Kelsch (Hennig) says its breeding places are marshes, earth rich in organic matter and similar localities. Hennig gives a summary of his views thus: Infectious icterus is always an acute specific—infectious, miasmatic, but not contagious disease.

It may be sporadic, endermic or epidemic.

It occupies a close relationship to abdominal typhus and bilious typhus.

It is always a disease with a favorable prognosis.

The infectious agent is always developed outside the human body.

It does not return.

As to treatment, complications must be met as they arise. Alkaline drinks and waters are recommended, so are lemonade, nitro-muriatic acid and hydrochloric as well, externally and internally. Calomel in small doses may be cautiously exhibited. Injections of cold water are recommended and finally the faradic-current. The diet should, in my opinion in most cases be restricted.

417 Adams Ave. July 21st, 1891.

ADDENDUM.

Permit me to epitomize an article which I find quoted from the *London Medical Record*, April 1885, in the *New York Medical Abstract* for May of the same year, which originally appeared in the *Berlin klin. Woch.* Dr. Lürman reports that in Bremen there occurred an epidemic of jaundice which lasted from October 1883 to April 1884. The epidemic was limited to between 1200 and 1500 ship-builders all employed by the same establishment. With the exception of being together during working hours they were separated. The soil was sandy, no extensive repairs had recently been made in any of the buildings, the water being repeatedly examined was found pure, no phosphorus was used around the building or in any connection with the men's work and no history of any former epidemic existed. Late in October 1883 the first case of jaundice presented itself, during November there were 33 cases, in December 137 more and to April 1884, 191 were recorded, though there were many that escaped observation. Masters, clerks and laborers were attacked indifferently. The attack began with a gastric or a gastro-intestinal catarrh which lasted a week or so when jaundice came on, "the symptoms were epigastric oppression and fulness, anorexia, vomiting, faintness, &c." Constipation generally present. "Yellow vision only occurred in a few cases." "Physical examination showed a prominent and tender epigastrium." There was no hepatic enlargement "nor was the gall bladder ever felt as a tumor. The whole process was a febrile; the pulse was often retarded," the fæces were but little changed from the normal. There was no albuminuria nor bile-acids but the "coloring matters were easily shown by Gmelin's test." Cerebral symptoms, general dropsy with anuria (cholæmia) occurred but once. There were no deaths. No cause can be assigned for this epidemic. "A neighboring factory of 600 persons entirely escaped." Bad or defective diet and impure water seem excluded as causes as in the one case the wives and children of the men were not attacked and in the other most of the men seldom drank of it, bringing coffee with them. "A curious connection," it is stated, was found to exist between the occurrence of the epidemic and the revaccination of the men. Out of 540 men in one lot revaccinated in August, 141 had jaundice subsequently, out of 466 in another lot 35 had it and of 283 in still another lot 14 were affected. Afterwards 50 more were revaccinated and but one was jaundiced. Another singular fact is that of 500 persons taken on afterward not one of whom was vaccinated not one was affected and of 87 persons revaccinated with other lymph and by another surgeon not one was attacked.

Dr. Lürman arrives at the following conclusion: The jaundice was evidently infectious, the "virus was strictly limited both as to time and place with a very long incubation period of from two to eight months and was casually connected with the revaccination in some way or other."

Society Reports.

PROCEEDINGS OF SECTION III OF THE SEVENTH INTERNATIONAL CONGRESS OF HYGIENE AND DEMOGRAPHY. AUGUST 10 TO 17, 1891.

THE RELATIONS OF THE DISEASES OF ANIMALS TO THOSE OF MAN.

COL. SIR NIGEL KINGSCOTE, K. C. B.,
PRESIDENT.

PRESIDENTIAL ADDRESS.

The President said: My first duty, in taking the chair of this very important and interesting Section of the first meeting of the International Congress of Hygiene held in the United Kingdom is to offer you all, on behalf of the Organizing Committee and the Council of the Section, a cordial welcome to our meetings, and to express to you our sincere thanks for your presence and co-operation in the work that is before us. The subjects that we shall have to discuss are of the greatest and most immediate importance to all classes of the community in every country; and I think myself happy in having been honored with the presidency of the first assemblage of medical men, verterinarians and agriculturists that have ever met on

common ground to discuss questions of the profoundest interest to them all, and to the world at large.

The title of our Section is sufficiently indicative of its scope and object. The relations of the diseases of animals to those of man have been the subject of more or less vague speculation by observers from an early period of the world's history; but it is only of late years that such relations have been systematically and scientifically studied. It would be in the highest degree inappropriate for me—who owe my position here to the accident of being somewhat intimately associated with the business management of two important institutions, which devote much of their energies to the study of animal life and animal diseases—to attempt to summarize the stages of development of this great question, or to pass in review the various diseases which have shown to be intercommunicable between men and animals. As to some of these—as, for instance, rabies and anthrax—the evidence appears absolutely conclusive. A few others are, perhaps, still within the range of speculation, or at least can hardly claim to have been proved to demonstration. On all these diseases and disorders, and the consequences which they involve, we are fortunate in having some of the highest living authorities here to instruct us, and I shall not abuse your good nature by standing between you and the study of their researches and experience.

There can be no doubt that the anatomical and physiological relations between the lower animals and the human being are sufficiently close to justify the presumption that they are liable to the same class of diseases; and one important part of the subject which will be considered during the meetings of our Section is the question of susceptibility, without which it would seem that the individual ceases to be responsive to the attack of the malignant virus.

In short, as will probably appear in a very prominent form in the discusssion of the papers on parasitic diseases, the whole question seems to resolve itself into the survival of the fittest, and it must be for this Congress to consider and discuss the best ways of combating the invasions of the human body by the many varieties of self-multiplying alien germs and external morbific influences which prevent the individual life from completing its normal course.

THE PREVENTION OF HYDROPHOBIA.

Dr. E. Roux, of Paris, delivered an address on the prevention of hydrophobia after infection by the bite of a rabid animal, and gave an account of the results obtained at the Pasteur Institute.

THE PASTEUR TREATMENT.

It was, he said, little more than six years since M. Pasteur has made the first inoculation in man. Since then thousands of persons bitten by mad dogs had applied for treatment at the Institute. At the last Congress of Hygiene in Vienna (1887) M. Chamberland had given an account of the results obtained by the then recent discovery of M. Pasteur. At the present day the number of persons treated was large enough to enable a judgment as to the value of the Pasteurian method to be formed. The application of antirabic inoculation to man had been rendered justifiable by the observations which M. Pasteur had made that dogs could in this way be prevented from developing the disease after inoculation. This fact, which could be easily proved by any competent experimenter, had been verified by the special commission appointed by the Government of England. Encouraged by his success with fowl cholera, anthrax, and swine plague, M. Pasteur had endeavored to obtain the virus of rabies in an attenuated form. He had been defeated in his attempts to create virus by artificial media, but he had succeeded by inoculating rabbits in the brain. After a certain series of inoculations, the disease developed itself in rabbits after an interval which could be exactly fixed. In this way it was possible to have, on any given day, the central nervous system from these animals which contained pure cultures of the rabic virus. That this was so was shown, not as in ordinary cultivations, by the character of the culture, but by the fact that the disease developed with a regular course, and because the central nervous organs did not show any obvious lesion. So completely successful had this method of maintaining virus been that the inoculations had been carried on ever since the year 1883 without interruption by a single accident.

The spinal cord from an animal thus inoculated contained a virus of high but constant virulence. If exposed in a sterilized flask containing fragments of potash at a temperature of 23° C., the cords during the procees of drying gradually lost their virulence, until after fourteen days they had completely lost it. In the treatment of persons bitten by rabid dogs this cord dried for fourteen days was first used, then the cord dried for thirteen days, then for twelve days,

and so on, going from the weaker to the stronger virus, until the cord which had only been dried for three days was employed. In this way immunity was produced. For the purposes of injection the cords were rubbed down in some sterilized bouillion which had been rendered slightly alkaline. Some difficulty was at first found in ascertaining the exact quantity which should be used for injection in man. At the first the strongest virus was that from a cord dried for five days. The immunity thus conferred was sufficient in most cases, but was not adequate in the treatment where the bites were numerous and serious. The method of treatment had been varied several times in consequence, but for several years that adopted consisted in giving at first large quantities of emulsion of cords of feeble virulence followed by the injection of more active emulsion. The actual quantity used varied from 3 cubic centimetres for the weaker virus to 1 cubic centimetre for the stronger, the quantity of dried nervous substance employed corresponding pretty nearly to a centigramme for each injection. The duration of treatment varied slightly according to the severity of the bites.

In the case of ordinary bites the following scheme was followed:—

1st day. Cord of
14 days, dose 3 cc. of emulsion
13 " " "

2nd day. Cord of
12 days, dose 3 cc. of emulsion
11 " " "

3rd day. Cord of
10 days, dose 3 cc. of emulsion
9 " " "

4th day. Cord of
8 days, dose 3 cc. of emulsion
7 " " "

5th day. Cord of
6 days, dose 2 cc. "
6 " " "

6th day. Cord of
5 days, dose 2 cc. of emulsion

7th day. Cord of
5 days, dose 2 cc. of emulsion

8th day. Cord of
4 days, dose 2 cc. of emulsion

9th day. Cord of
3 days, dose 1 cc. of emulsion

10th day. Cord of
5 days, dose 2 cc. of emulsion

11th day. Cord of
5 days, dose 2 cc. of emulsion

12th day. Cord of
4 days, dose 2 cc. of emulsion

13th day. Cord of
4 days, dose 2 cc. of emulsion

14th day. Cord of
3 days, dose 2 cc. of emulsion

15th day. Cord of
3 days, dose 2 cc. of emulsion

In bites about the head the incubation period was often very short; it was therefore necessary to act with promptitude, and to increase the number of injections in the earliest days, in order to save time. Further, the treatment was prolonged for twenty-one days, according to the following table:—

1st day—morning
Cord of 14 days, dose 3 cc. of emulsion
" 13 " " "

1st day—evening
Cord of 12 days, dose 3 cc. of emulsion
" 11 " " "

2nd day—morning
Cord of 10 days, dose 3 cc. of emulsion
" 9 " " "

2nd day—evening
Cord of 8 days, dose 3 cc. of emulsion
" 7 " " "

3rd day—morning
Cord of 6 days, dose 2 cc. of emulsion

3rd day—evening
Cord of 6 days, dose 2 cc. of emulsion

4th day
Cord of 5 days, dose 2 cc. of emulsion

5th day
Cord of 5 days, dose 2 cc. of emulsion

6th day
Cord of 4 days, dose 2 cc. of emulsion

7th day
Cord of 3 days, dose 1 cc. of emulsion

8th day
Cord of 4 days, dose 2 cc. of emulsion

9th day
Cord of 3 days, dose 1.5 cc. of emulsion

10th day
Cord of 5 days, dose 2 cc. of emulsion

11th day
Cord of 5 days, dose 2 cc. of emulsion

12th day
Cord of 4 days, dose 2 cc. of emulsion

13th day
Cord of 4 days, dose 2 cc. of emulsion

14th day
Cord of 3 days, dose 2 cc. of emulsion

15th day
Cord of 3 days, dose 2 cc. of emulsion
16th day
Cord of 5 days, dose 2 cc. of emulsion
17th day
Cord of 4 days, dose 2 cc. of emulsion
18th day
Cord of 3 days, dose 2 cc. of emulsion
19th day
Cord of 5 days, dose 2 cc. of emulsion
20th day
Cord of 4 days, dose 2 cc. of emulsion
21st day
Cord of 3 days, dose 2 cc. of emulsion

The large quantities of spinal cords of feeble virus injected during the first three days had the effect of bringing the patient quickly into a fit condition for being inoculated with the more active cord. The two schemes described above could of course be altered to suit varying circumstances; for instance in numerous and deep bites on the limbs a line of treatment was adopted intermediate between the two above named schemes. Persons treated at the Pasteur Institute were divisable into three categories. The first included those persons bitten by animals which were proved by experiment to be suffering from rabies; the second class included those persons bitten by animals recognized to be rabid by verterinary surgeons; while the third class consisted of those bitten by animals only suspected of suffering from rabies.

The following is the result of the antirabic vaccinations of each category for the five years 1886–90. The results of the present year were not stated, because sufficient time had not yet alapsed:

Classes A and B:—Treated, 7,925; deaths, 73; mortality, 0.92. Class C:— Treated, 1,540; deaths, 17; mortality, 1.1. Total.—Treated, 9,465; deaths, 90; mortality, 0.95.

It would be seen that the general mortality among these 9,465 persons was 0.95 per cent. as compared with 12 or 14 per cent., which was the mortality of persons not treated. These figures included all the cases which died after treatment: but to be absolutely just, the persons who had died a few days after the treatment ought to be excluded, for in them the disease had broken out before the preventive inoculations had had time to produce their effect. If these deductions were made, the mortality would be reduced to 0.61 per cent.

In order, however, to study more exactly the efficacy of the treatment it was desirable to exclude patients bitten by animals only suspected of being rabid, and to confine attention to classes A and B. Further, he would take out of these those patients who had been bitten on the head. The gravity of bites in this situation was well known; it produced among patients not treated a mortality of 80 per cent.; 710 persons bitten about the head had been treated at the Pasteur Institute, and 24 had died—that is to say, there had been a mortality of only 3.38 per cent. Further, it should be remembered that in this proportion of 3.38 per cent. were included those cases in which the disease broke out immediately after the inoculation had been made, and which might very properly be excluded from the list.[1] Was it possible to give a more convincing proof of the efficacy of the antirabic treatment? What one among all the methods of treatment known to medicine could claim to have fewer failures? Pasteur might therefore reply to his detractors by asking them another question: Have you anything better to propose? Among the 9,465 persons treated 1,551 were not French; 24 had died, a proportion of 1.29 per cent. The somewhat higher mortality among those patients had to be attributed to the longer period which had elapsed before they came under treatment. The number of English patients treated had been 389, and the mortality among them was 1.8 per cent. This high rate was due to the considerable number of patients who had been severely bitten, but who had only presented themselves for treatment several days after the injury. It was most important to remember that the shorter the interval the greater was the prospect of success.

The nature of the change produced in the cords by the process of drying was questionable. It was certainly due to combined action of the air and of the desiccation, for cords kept at the same temperature in a moist atmosphere of carbonic acid or hydrogen, retained their virulence for a long time. The change was probably not a true attenuation such as was observed in anthrax vaccine. It was more probable that the vitality of the rabid virus was first modified and then destroyed. Since the process of desiccation affected the various parts of the cord unequally, it was desirable always to employ rabbits of the same weight, those used being of the weight of 2 kilogrammes. M. Pasteur believed that, in addition to the living virus

[1] Nine persons had died of hydrophobia within 15 days after treatment. If this number was deducted the rate of mortality would be 2.14.

in the cords, special chemical bodies were formed by the rabid microbe, which bodies probably had some part in producing immunity. In certain cases which had been treated at the Pasteur Institute a long time after the infliction of the bites, it was thought that the earliest symptoms of hydrophobia were already developing, and in certain of these cases these symptoms, such as pain along the course of the nerves and hyperæsthesia, had disappeared under treatment. In certain cases also in dogs it appeared probable that rabies had been aborted by vaccination after inoculation. A point to which much importance ought to be attached was that during the process of preparation a cord should be kept absolutely pure and free from contamination by microbes. This could only be ascertained by inoculating with particles two days before the cords were inoculated for vaccination. By taking these precautions, the danger of producing an abscess at the point of inoculation was almost completely avoided.

Since the method of treatment was first adopted the rate of mortality had declined: thus, in 1886 it was 1.34, but in 1889 it had fallen to 0.54, and in 1890 to 0.71. It might be asked whether even this mortality might not disappear. He feared, however, that this could not be. In the first place, most of the deaths were among persons who died within a fortnight after the completion of the inoculations, that is, persons who were already developing the disease when the treatment was commenced. Another reason why success could never be absolutely complete was that the virus might remain latent in the system for months or even for years. The condition of immunity produced by the preventive inoculations might in fact disappear before the virus itself had perished, and in this way the cases of development of hydrophobia at a very late period would continue to occur.

THE PREVENTION OF RABIES IN DOGS.

Dr. George Fleming, C.B., F.R.C.V.S., said that it was now generally accepted by those who had most carefully studied the subject, that rabies was a purely contagious disease, due to a virulent principle or specific agent.

Of all the domesticated animals, the dog was certainly the one which was by far the most frequently attacked, and perpetuated the malady. In the interests of mankind, no less than in those of the domesticated animals, and particularly of the dog itself, this very alarming, most painful, and always fatal disorder should be suppressed.

The measures necessary for the extinction of the disease must be based on the fact that the dog was the chief, in fact the sole, propagator of rabies; that the contagium or infecting material was conveyed from the diseased to the healthy by means of bites (other means being so exceedingly rare that they might be left out of consideration;) and that to free a country from it, all rapid and suspected dogs should be destroyed, certain restrictions maintained for a limited period, and only dogs from other countries exempt from rabies allowed admission.

That the disease could be limited, or altogether suppressed by the enforcement of proper measures, there was an abundance of evidence to prove. Sweden, Norway, Switzerland, Baden, Prussia, Bavaria, Würtemberg, and other countries have been freed from it by such measures; while countries in which it had never been seen, such as Australia and New Zealand, were preserved from its invasion by such precautionary measures as quarantine of imported dogs, or, as in Sweden, total prohibition of importation of dogs.

That the dog was the sole propagator of the disease was well seen from recent English statistics. In 1888 and 1889, 90 and 91 per cent. of the animals reported as rabid were dogs, and in 1890 the percentage was more than 96. The animals other than dogs were infected by rabid dogs, and these infected each other.

He then proceeded to discuss the preventive measures which should be adopted, taking them in the order of importance, in the following terms:

1. *Destruction of Rabid Dogs.*—The necessity for the destruction of all rabid dogs is so self evident that it need not be further insisted upon. The disease is incurable, causes much suffering, and the affected dog is, so long as it lives, so great a danger to other creatures that its speedy destruction is imperative. Dogs which are suspected of being rabid, or of becoming so through contact with those which have been affected, must always be a source of grave apprehension and danger, and unless they can be kept under close and safe observation for a considerable time, should also be destroyed, seeing the risks incurred in allowing them to live. A suspected dog may be defined to be one that presents symptoms resembling those of rabies, or which has been in conditions that have rendered infection probable or possible.

2. *The Control of Ownerless Dogs.*—Wandering dogs are the chief agents in the propagation of rabies, for the reason that they are more exposed to contamination than those which are properly cared for, and also because rabid dogs, even when carefully guarded, seek to wander from home. In proportion as wandering dogs abound in infected countries, so is the disease prevalent. This is a well established fact. In England in 1888, of 160 rabid dogs, 64, or 40 per cent., were returned as stray ones; in 1889, of the 312 rabid dogs reported, 121, or more than 38 per cent., were evidently ownerless; while in 1890, 64 out of 129, or more than 51 per cent., were so returned. Therefore, in order to limit the propagation of rabies, all wandering dogs should be secured, and, if not claimed within a certain period, destroyed.

3. *Muzzling.*—The value of the muzzle in suppressing rabies has been demonstrated on many occasions; and in serious outbreaks of the disease its introduction has always coincided with a diminution in the number of cases and the eventual extinction of the scourge. Its use is also coincident with a decrease in the number of cases of hydrophobia occurring among people during such outbreaks and their ultimate cessation. The evidence in support of this statement is so voluminous and explicit that anyone examining it must be convinced as to the certainty of the fact. After referring to the experience of Berlin since the severe outbreak in 1852, which led to the issue of a degree that all dogs should be provided with a wire muzzle positively preventing the animal from biting, and empowering special persons appointed by the police for that purpose to seize and destroy all dogs not so muzzled, Dr. Fleming continued:

In Vienna we are informed that rabies was entirely suppressed by 18 months of stringent muzzling, but in the summer of 1886 the muzzling order was recinded and badges had to be worn on dogs' collars instead. In the following half-year there was only one case of the disease, but in the next half year rabies became epizootic and the muzzle had again to be worn, with the result that the malady soon subsided and disappeared. Consequently the muzzling order is still rigidly and most beneficially enforced in Vienna.

In Holland, before 1875, rabies were prevalent to a very serious extent; but in June of that year the use of the muzzle was ordered with the result that in the autumn the number of cases fell to 41; in the next whole year they were 55; in 1877 they were 14, in 1878 they were 4, and in 1879 they were 3.

These, and the cases which have since been reported, only occurred on or near the frontier of Belgium, in which country the muzzle is not in use though rabies is always prevalent. To such a degree, indeed, does the disease exist in Belgium that in 1889 there were brought to the Veterinary School at Brussels no fewer than 94 really rabid dogs, 49 having been admitted during the winter quarter and 45 during the summer quarter; and from January 1st to April 24th, 1890, 16 were taken there.

In the Grand Duchy of Baden, during the years 1871, 1872, 1873, 1874, and 1875, the number of cases of rabies was respectively 18, 37, 37, 50, and 43. Then the muzzle was rigorously applied, and in 1876 there were 28 cases; in 1877, 3; in 1878 4; in 1879, 2; in 1880, 2; in 1881, 2; in 1882, 3; in 1883, 2; in 1884, 2. Since that year only one case has been observed and that was a dog from Metz, where there were no proper regulations and which had been contaminated before its arrival at Baden.

In Sweden rabies was at one time a somewhat common disease, and from 8 to 10 people died annually of hydrophobia, but on muzzling being enforced and the importation of dogs prevented, rabies have been unknown for many years, and no deaths from hydrophobia have occurred since 1870.

In England the value of the muzzle has been as well exemplified as elsewhere, though its application has always been extremely partial, being only employed in towns or districts when rabies has increased to such an extent as to create alarm, and removed immediately when the disease had for the time disappeared. No effective action has at any time been taken to suppress it in England or Ireland; in the latter country it is always more or less prevalent, and ever since it was first legislated for in England it has maintained a permanent existence in the following 14 counties, namely, Chester, Derby, Essex, Hants, Kent, Lancaster, London, Middlesex, Notts, Surrey, Sussex (East), Sussex (West), Warwick, and York (W. R.) During the past year cases of rabies were reported for the first time in three counties previously free from it; these were Bucks, Norfolk, and York (E. R.;) and it was reintroduced into Leicester after an absence of two years, and into Stafford, which had been free for one year.

The extent to which rabies has prevailed in this country may be judged from the loss of human life through bites from rabid dogs.

It is stated that in England (including Wales), there have been 939 deaths from hydrophobia recorded during the past thirty-eight years, the yearly average for the first sixteen years being 8, for the next sixteen years 15, and for the remaining period, ending in 1885, 45. Thus, the mortality has steadily advanced through more than 400 per cent. On the other hand, the Prussian preventive measures have reduced deaths from hydrophobia to a remarkable degree; for while in the decade ending in 1819 there was a yearly average of 166 deaths, in a similar period ending in 1886 there was a yearly average of 4½.

The value of the muzzle in suppressing rabies, has been, perhaps, best demonstrated in London, on several occasions, and especially in 1885. In the previous years hydrophobia had increased to a very alarming extent, as has just been mentioned, in England, and no steps worthy of note had been taken to check the mortality. For London alone in that year no fewer than 27 deaths of people were reported as due to the bites of rabid dogs. A muzzling order was then enforced, and at the end of 1886 not a death was recorded. Unfortunately, the order prescribing the use of the muzzle was then rescinded, and in a few months a case of hydrophobia occurred in the south of London, soon to be followed by others, and in 1889, 10 deaths were registered. In July of that year the muzzling order was again issued and stringently carried out, and rabies and hydrophobia once more disappeared.

In other countries where rabies prevails and dogs are not muzzled, though other measures—as the dog tax, medal on the collar, leading by a leash, etc—are enacted, the malady continuously manifests itself, and numbers of people perish from hydrophobia every year. We may give Belgium and France as examples. In the latter country the monthly sanitary bulletin shows to what an extent it is prevalent, and I need only refer to the last two which I have to hand those for March and April of the present year. In March, 132 dogs and 8 cats were destroyed as rabid, besides those sacrificed as a preventive measure; while 32 persons were bitten by mad dogs, as well as cattle and pigs. In April, 151 dogs and 4 cats were destroyed because of being rabid, and a large number were killed because they had been bitten by mad dogs or were wanderers; and 47 persons were wounded by mad dogs. The reports of the Pasteur Institute show that by far the largest proportion of persons protectively inoculated are French. There can be no doubt that if the use of the muzzle were enforced generally and strictly throughout France rabies would quickly vanish from the sanitary bulletins.

Belgium has tried all the other recognized measures except the muzzle, and yet the malady is as rife and deadly as ever. A Royal Commission was recently appointed to inquire into the subject, and the report addressed to the Superior Council of Hygiene in April last states that the regulations in force are insufficient, and, while not contesting the value of Pasteur's preventive inoculations with regard to people bitten by rabid dogs, it is urged that there is something far more desirable, and that is the extinction of the disease in the canine species. For this object the Commission insists upon the immediate adoption of the muzzle.

4. *Dog Tax and Registration.*—The imposition of a dog tax and registration is necessary to limit the number of dogs and to ensure that every one has an owner, who should be held responsible for any damage it inflicts. From this measure no dog owner should be exempt. If an entire country is infected with rabies then suppressive measures should be applied to the whole area, uniformly and energetically, until the malady is perfectly extinct. If only a portion of a country is visited by it, then it is questionable whether such measures should be limited to that portion only. If it were possible to keep all the dogs it contains within its boundaries, then such a step would suffice, if a certain zone around it were established beyond which no infected animals should pass. But it would be extremely difficult, if not impossible, to establish such a barrier; and, to effectively rid a country of rabies, though only partially infected, the sanitary police measures should be applied to the whole. That such a result is possible has been proved by the experience of the countries I have named, and, from these examples and what we know of the disease, it may certainly be affirmed that rabies need only exist in a country which does not desire to get rid of it.

Dr. J. Bardach (Odessa) gave the results of the Pasteur method of treatment in the bacteriological institute of that town during four years. Between 1887 and 1890, 2,243 patients had been treated, and of these only 16 had died, giving a mortality of 0.72 per cent; and if, following the statistics of the Pasteur Institute, they collected only those that died after the treatment had been carried on for two weeks, they obtained the

following figures: 2,238 treated, 11 of which died, giving a mortality of 0.49. He gave a number of statistics of the more severe injuries of the head, etc., from which it might be gathered that in these cases the results were not so favorable, especially where the wound was such as to implicate the brain or central nervous symptom, or the tissues closely associated with them, the mortality in these cases rising as high as 1.51 per cent. Where the hands were affected it was as low as 0.69 per cent., and where the lower limbs and trunk were affected it fell to 0.61 per cent. These results, he thought, might be considered exceedingly satisfactory, and would compare favorably with any other statistics.

Dr. Hime (Bradford) said all who had studied the Pasteur method were satisfied that it was established on a scientific basis; and he gave an example in the case of a dog of his own of the efficiency of the remedy. He thought, however, that it would be an advantage, in spite of what Dr. Fleming had said, to have the name and address of the owner of a dog on its collar, as at any rate it would enable the veterinary surgeon to ascertain the district from which any dog had come, and would enable him to grapple more readily with the disease at its source. He thought that the law might be made more stringent as regards owners of dogs, and that it should be possible to proceed against them more readily than at present; the onus should be placed on the owner, and not upon the bitten person. The present system of muzzling dogs in certain areas only was radically bad, and was manifestly useless and absurd; it was not only stray dogs that required muzzles, for all dogs were liable to become rabid. It had been demonstrated by MM. Roux and Nocard that even three days before the slightest symptom of rabies showed themselves in an infected dog under careful observation, its saliva was infective, and, when inoculated, would cause rabies in other dogs and other animals; this showed how very important it was to know whence a rabid dog came, so that extra precautions might be taken throughout the area. That rabies could be entirely eradicated was indubitable, and that it was still existing among us was characteristic of our apathy. As pithily said by His Royal Highness in his opening address, "If preventable, why not prevented?" Dr. Hime asked, in conclusion, whether there were any facts available as to the question of how far the dogs of Australia, where rabies was unknown, were less susceptible to rabies than the dogs of other countries, or whether the fortunate immunity of Australian dogs was due entirely to the measures of quarantine of three months carried out there against all imported dogs?

M. Nocard (Alfort) mentioned a prophylactic treatment which was applicable to domestic animals, at least to herbivores. M. Galtier had some time ago announced that the injection of rabic virus into the veins of the sheep and the goat did not produce hydrophobia, but rather conferred immunity. He himself had quite recently made a number of experiments, by which he had been able to show (1) that the extravenous injection of rabic virus would not produce rabies in horses; (2) that if the quantity of virus injected was sufficient, these inoculated equines acquired an immunity against rabies; (3) that it was possible to protect equines inoculated by intraocular injection when there were introduced into the veins certain quantities of dilute rabid nervous material. From these experiments he thought it might be hoped that a prophylactic treatment might arise out of the labors of M. Galtier. Upon the question of the prophylaxis of canine hydrophobia, he was in principle entirely at one with Professor Fleming, and he considered that muzzling would be exceedingly useful; but it must be remembered that no muzzle would prevent a mad dog from biting. Anyone who had seen a foaming mad dog tearing at the bars of his cage would understand how useless the muzzle would be. The muzzle, however, would indicate that a dog had a place in which to live and was well looked after, and that if all others were destroyed the greater number of candidates for madness would be exterminated. Of course a leash would serve equally well, and he gave examples of how these would work. The truth was, there was no necessity for new sanitary measures for the suppression of rabies; it would be quite sufficient to determine and to apply exactly and rigorously the most simple measures that were already actually prescribed in all civilized countries.

Dr. C. R. Drysdale (London) said that, having frequently attended the inoculations at the Institute Pasteur, he could speak with the very greatest admiration of the immense care and intelligence shown in the carrying out of the treatment. As to the issues of Pasteur's plan, he considered it now clearly proved that, when only 0.92 per cent. of deaths had occurred after this treatment, as compared with probably more than 20 per

cent. in similar cases, it was an indulgence in an improper amount of scepticism to deny it any longer. Consequently, he thought it was high time that a Pasteur Institute should be formed in London, for it was not fair for English people to send over all their patients to Paris and then to abuse Pasteur and his noble-minded assistants. As to the prevention of rabies, a muzzling law could be applied in England better than any other European country because it was surrounded by the sea, and, if muzzling were attended to for a year, the disease might be stamped out of the United Kingdom, and when once stamped out it might, as in Australia and New Zealand, be kept out by means of quarantine. There was no doubt that rabies was an eminently preventable disease, and being so, it was extremely immoral in anyone to refuse to help forward such a salutary law in this and other countries as the muzzle law of Prussia.

Professor Redfern (Belfast) agreed that muzzling in certain areas only was so ridiculous that it was wonderful how it could be thought of as being likely to bring about useful results. He thought that this matter was one that should be brought officially before the Congress, and that no uncertain voice should be given by a vote of the whole Section, if necessary. They would then go to members of both Houses with their hands strengthened, and be able to place the matter in a very strong light, so that they might obtain satisfactory legislation, but he wished it to be understood that, as the matter had been brought up, a very great responsibility rested on every member of the Section, and he hoped that both publicly and privately they would do all in their power to put this question on a satisfactory basis.

Dr. Ostertag said it had been suggested that the muzzle was ineffectual because cats and wolves carried the disease as well as dogs, but that cases of this sort were rare was proved by the experience of Germany. Since the passage of the laws regulating the contagious diseases of animals rabies had become a rare disease and only occurred along the French and Russian borders. These laws provided that all mad dogs, and those suspected of rabies, or even of having bitten, were to be killed, and all dogs and cats within a radius of fifteen miles must be kept in confinement during three months each year. In Berlin all dogs wore muzzles, and a case of hydrophobia had not been reported for ten years. As a result of these laws a Pasteur Institute in Germany was unnecessary.

Sir Henry Simpson (Windsor) said that no doubt they would all agree with Dr. Fleming that muzzling was an efficient remedy. He wished to call attention to the practical carrying out of a muzzling order, and to warn the Section if they made a recommendation to the Legislature to endeavor to make some exemptions, or they were likely to recommend in vain. He would say exempt sporting dogs, because for seven or eight months in the year these were used for hunting purposes. Hunting and sporting led to the employment of many persons, many horses, and expenditure of money. If men of wealth were asked to sacrifice their hunting for a couple of years they would not do it, and the country would not sanction a measure which would result in such a loss of revenue to the trade of the country. Considering that sporting dogs were well cared for, and that their owners were true lovers of dogs, it appeared to him that they need not be muzzled, but that it should be a recommendation that they be kept in charge of competent persons, and that any deviation from health should be at once noted, and an inspection made by a properly qualified veterinary surgeon, and, if necessary, the animals kept in quarantine.

Dr. Elizabeth Blackwell begged to call attention to the suffering of dogs made to produce virus; she herself had visited the Pasteur Institute and seen a series of dogs in the various stages of induced madness.

Professor Brown said that as the head of the department which was charged with the duty of checking the progress of contagious diseases of animals, he wished to refer to some of the questions which had been dealt with in the course of the discussion. He agreed with every word which Dr. Roux had uttered as to the value of M. Pasteur's method, and with all that Dr. Fleming had urged in favor of preventive measures, but he wished to emphasize the difficulties which arose from the sentimental objections of owners of animals, who, as Dr. Roux had remarked, were quite incapable of realizing that their dogs might become mad, although they were keenly alive to the risk incurred by their neighbors' dogs, and believed in the necessity of imposing restrictions on them. He could assure the meeting that if they by a strong expression of opinion induced the Legislature to insist that all the dogs in the United Kingdom should be muzzled for a certain time, every one in his

department would be gratified; but he need hardly remark that an order to that effect emanating from the Board of Agriculture, even if they had power to pass one, would excite unusual opposition.

Professor Perroncito indicated that in the municipality of Turin they had a laboratory for the Pasteur antirabic treatment that gave exceedingly good results, as published by the director, and he also mentioned that an experimental inquiry upon the same method of treatment had been commenced in connection with such animals as oxen, horses, etc., with most encouraging results.

DEMONSTRATION OF ANIMAL PARASITES.

Professor Brown gave an exceedingly interesting demonstration of animal parasites, first treating the subject generally, and taking up the questions of symbiosis, mutualism, commensualism, and parasitism. That the subject was not quite as simple as might at first sight appear was evidenced when he stated that Van Beneden had described no fewer than 400 species of strongules. He then gave a demonstration of the developmental stages of certain of the fluke or trematodes and of the cystic worms or cestodes.

ACTINOMYCOSIS.

Professor Perroncito, after mentioning some cases of direct infection of the skin with actinomycosis, said that he should reserve the greater part of what he had to say until Friday.

PARASITES TRANSMISSIBLE FROM ANIMALS TO MAN.

Professor Ralliet (Alfort) observed that the parasites transmissible from animals to man were either vegetable or animal. The vegetable parasites included besides the bacteriaciæ or microbes and divers saprophytes that were only accidentally parastic, the fungi (*tricophyta*) which caused the several affections designated by the name of "tinea." The animal parasites might be divided into external and internal parasites.

Of the internal parasites some were common to man and animals, or, living more especially in animals, might develop accidentally in man; they were often transmitted indirectly, while others must necessarily penetrate into the human organism in order to complete their evolution, and hence their transmission was always direct (*Tænia solium, Tænia saginata.*)

Indirect transmission took place very generally through the medium of drink or food, polluted or infected by the deposition of ova or embryos.

Direct transmission was brought about by the consumption of the flesh of infected animals. In this case the parasites living in the larval state in animals attained their complete development in man (*Tœnia solium, Tœnia saginata, Bothriocephalusl atus, Trichina spiralis.*

Prophylaxis must be regulated by the indications furnished by the preceding data: 1. So far as concerned external parasites, man ought, as far as possible, to avoid contact with animals suffering from parasitic affections transmissible to his species; he ought to endeavor to destroy the parasites and their progeny, not only in those animals themselves but also in all spots which might have been infected. 2. Since internal parasites were introduced generally through the medium of food or drink, it was expedient only to consume these substances after a careful examination and after having purified them, were necessary, boiling filtration, or other means. 3. Certain sanitary measures might contribute effectively to the completion of the protection.

TRICHINOSIS IN THE NETHERLANDS.

Dr. B. Carsten said that the first trace of trichinosis in the Netherlands was discovered in 1883, at Jerseke, a village near Goes, in South Beveland, one of the islands forming the province of Zeeland, whence by means of the pigs kept at and the rats infesting a tannery and storage for offal, the disease spread till 140 persons in 7 different parishes on the island were affected, one succumbing. The disease, which threatened to become enzootic in this district, was stamped out, thanks to the energetic measures adopted. A royal decree was issued prohibiting the removal of pigs and pig manure from an infected district, and a special verterinary inspector was stationed temporarily in the neighborhood as supervisor; the local authorities instituted a strict search for for trichinæ, ordering that all pork before consumption should be submitted for inspection to a competent committee appointed for that purpose, that all pig yards should be overhauled, and that whenever any trace of trichinæ was found the infected swine and all vermin found in the neighborhood thereof should be killed and, together with the offal, consumed by fire. The only other appearances of trichinosis in the Netherlands were in 1888, at Leyden and Noordwyk, two places in close proximity in the province of South Holland, where prompt action stopped its

spread. Since 1889 there had been no return of the disease in the Netherlands. In March, 1888, trichinosis was included among infectious cattle diseases, and consequently all infected pork became liable to seizure and destruction by order of the local verterinary official. That trichinosis, now a thing of the past in the Netherlands, was due to the thorough organization and the persistent enforcement of precautionary measures.

SELECTED FORMULÆ

WHOOPING COUGH.

The following treatment is used very largely by certain leading specialists in diseases of children in Paris. The treatment is divided into three periods. The patient should remain in one room or in bed. The following prescription is given:

℞ Tincture of aconite
Tincture of belladonna } aa.....3j.
Camphorated tinct. opium

M. Sig. Two to five drops once or twice a day, according to the age of the child.

If there is no febrile movement the amount of aconite may be much decreased, and if constipation is present the opium should not be used. In the second period, or when vomiting comes on, ipecac may be given in small amounts to allay gastric irritation; and in the third period, when convalescence is established, cod-liver oil, tonics and Fowler's solution will be found of service.—*Medical News.*

ZINC SULPHYDRATE AS A DERMATIC.

Zinc sulphydrate is a white precipitate—$Zn(SH)_2$—which must be preserved under water, as it is prone to decompose in the dry state. It was employed by Barduzzi, internally as well externally, in Chronic Eczemas, Psoriasis, and Vegeto-parasitic Dermatoses, with favorable results. According to Barduzzi, the desirable action of this salt is based on the sulphur being made absorbable and its irritating properties being lessened. For its administration, he gives the following formulas:

INTERNAL.

℞ Zinc sulphydrate, washed...grammes 0.5 [gr. 7½].
Extract gentian.....*sufficient to make* 50 pills.

3--12 pills daily.

EXTERNAL.

℞ Zinc sulphydrate.....grammes 5.0 [ʒ 1¼].
Lanolin.....grammes 20.0 [ʒ 5].
Lard.....grammes 30.0 [ʒ 7½].

Make ointment.

—*Merck's Bulletin.*

FERRATED CODLIVER OIL.

C. Neuss, in the *Pharmaceutische Zeitschrift für Russland*, recommends the following process for ferrated codliver oil:

℞ Codliver oil.....parts 20.
Alcohol of 90 per cent.....parts 15.
Liquor potassæ (s. g., 1.120 to 1.130) parts 33.

Mix and saponify by the aid of heat, in a spacious vessel of iron or enameled ware, stirring continuously. Then add

℞ Liquor ferri perchloridi.....parts 27.
Water.....parts 50.

and continue the heat and agitation until the iron soap is precipitated in the shape of a brown mass. Let cool, and, after carefully decanting the aqueous liquid so far as possible, and, if necessary, evaporating all watery residue, add to the iron soap five times its volume of codliver oil, and again raise the temperature until the soap is entirely dissolved. Add codliver oil sufficient to bring the whole up to 270 parts. The product is a ferrated codliver oil containing 1 per cent. of iron, of a pleasant flavor, and of a fine Malaga brown color. It keeps well.

PRURITUS.

Dr. Brubaker recommends the use of the following preparation for pruritus:

℞ Acid. hydrocyanic. dilut.....fʒ ij.
Sodii borat.....ʒ j.
Aquæ rosæ.....fʒ viij.

M. Sig. Use as a lotion.

MERCURY FOR GLANDERS.

Gold (*Lancet*) reports two cases of glanders cured by inunctions of mercurial ointment, twice a day for a month, the patient being kept at the point of salivation. The effect on the mouth was combated with chlorate of potash gargles, and on the body suppurating spots were treated by poulticing, incisions, washing out with solutions of perchloride of mercury, and dressed with iodoform gauze.

REMEDY AGAINST CHILBLAINS.

A very effectual treatment of chilblains consists in rubbing the parts twice daily with

℞ Baume de fioraventi.....grammes 100.
Acidi hydrochlorici dil.....grammes 15.

—*Journal des Maladies Cutanées.*

THE

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The Editor will be pleased to get medical news, but it is important that brevity and actual interest shall characterize communications intended for publication.

LEADING ARTICLE.

POPULAR HYGIENE AND CRIMINAL IGNORANCE.

In the issue of the REPORTER for September 5, 1891, we published a paragraph, quoted from the *Lancet*, which stated that the Devonshire County Council, co-operating with the National Health Society, is sending trained teachers and lecturers through Devonshire, with the view of extending among the poorer population the knowledge and means of preventing common ailments, and the selection and preparation of wholesome food. "We do not doubt," says the *Lancet*, "that good will result from this effort to educate the people. It is impossible to overestimate the mischief which now results from ignorance, but if the ordinary means of prevention of disease, and the laws of health can be made of general knowledge, a great advance will be made."

The above paragraph affords us much food for thought and, at the same time, calls forcibly to our minds the crying need for a more general knowledge of the fundamental principles of hygiene by the people at large, and the absolute criminality of an entire ignorance of or disregard of them. It is high time that the profession, as well as local Boards of Health, should be stirred up to greater activity on this matter.

The highest possible aim of the physician must be the prevention of, rather than the cure of disease, and it might be well if the Chinese method of remunerating the family physician only while he maintains health in the household were adopted in this country.

It is generally appreciated by every member of our profession, that a disregard of sanitary precautions in a single case of contagious disease occurring in childhood, may be a greater menace to life than a misplaced switch before a crowded passenger train. While ignorance on the part of the switchman would be a poor defense, yet if clearly proven, the fault of his superiors in not giving proper or adequate instructions surely only increases the criminality of their

neglect; and again, if it were clearly shown that their superiors practiced a continual disregard of public safety, would it not be time indeed for the local authorities to set about, with all speed, to see that proper instructions *were* given and their observance *enforced*?

The two cases are parallel, and need no further elucidation. In the first instance, the ignorant public can only look toward their "sanitary superiors"—their physicians—for instruction, and these failing, the local Health Boards must act with prompt decisiveness. These facts are universally granted, and utterance here may seem superfluous, while the object lesson cited may be considered more fit for school children than thinking physicians. Granted, and if so the criminality of our profession in failing to properly instruct the masses in the simplest rules of public health, is so much the greater, and the importance of the step taken by the Devonshire County Council, incidently mentioned by our English contemporary, cannot be overestimated.

It is now an indisputed fact that the infectious diseases of childhood can only be occasioned by direct infection or contagion, as their name implies, and also, that such infection and contagion are unlikely to occur if proper preventive (hygienic) means are employed. It is impossible for either the physician or the Board of Health to enforce the employment of these without the entire co-operation of the public. The prevention of these diseases, or in other words, the preservation of public health and the lessening of our death rate must devolve upon the action of the public at large.

Yet, how can we, with reason, expect an *ignorant* public to perform so important a duty? Is it not more than time, in the face of these facts, that the profession should bestir themselves to find some means of accomplishing this object?

The writer recently rode in a crowded street car in which beside many healthy children, there was one with whooping cough, another infant but barely convalescing from scarlet fever, while a consumptive sat in the corner, and coughed and expectorated on the floor of the car despite the printed notice requesting him not to do so. Yet the jostling crowd was content!

It was an undoubted case of "blissful ignorance," and yet our minds reverted forcibly, and not too kindly, to the fact that each of these person's health was probably looked after by some reputable physician.

The proper observance of hygienic principles, the isolation of cases of contagious diseases, the removal of all possible causes of infection, and above all the careful and proper instruction of the public in these matters, are duties the performance of which every member of our profession should hasten to accomplish.

Let, therefore, the action of the Devonshire Council in this matter serve as an incentive. If criminal fault there be, let not the fault rest upon our shoulders. The knowledge is ours, and ours the duty to disseminate this knowledge. Let us not, therefore, hide the light of advanced science "under a bushel."

Book Reviews.

MINOR SURGERY AND BANDAGING, INCLUDING THE TREATMENT. By Henry R. Wharton, M. D., Phila. Lea Bros. & Co., 1891. p. 497.

The author has in this work endeavored to present, in as concise a manner as possible, a description of the bandages, surgical dressings, and minor surgical procedures which are employed in the practice of surgery at the present time, together with the preparation and application of antiseptic dressings, the dressing of fractures and dislocations, and short articles upon trache, otomy, intubation of the larynx, ligation of the arteries, and amputation. The author's positions and long experience as lecturers demonstrator, and hospital surgeon enable him to write authoritatively upon all these subjects.

The book is so uniformly excellent from cover to cover, that it is difficult to particularize, but the preparation and application of antiseptic dressings is especially well written and modern, and the articles upon tracheotomy and intubation of the larynx,

are clear and practical, upon both of which operations the author is an accepted authority in the surgical world.

The work is profusely illustrated with cuts, mostly new, and taken from photographs, the illustrations of the bandages and dressings for fractures being the finest that have ever been used in any work upon the subject.

It is no exaggeration to say that it is one of the most satisfactory books published upon this subject, and one that can be unreservedly recommended to students of medicine everywhere. It will also prove useful as a work of reference for the busy practitioner.

PERISCOPE.

THERAPEUTICS.

THE ABORTIVE TREATMENT OF ERYSIPELAS.

Dr. Natale Amici's (*Gazetta Medica di Roma*) method consists in sterilizing the streptococcus of erysipelas in the shortest time possible. Infection is not always limited to the reddened portion of the skin, but is often found beyond this in the latent state, even at the distance of thirty-five to forty centimetres, as the author has been able to undoubtedly prove in erysipelas of the extremities. It is not always easy to decide whether the infection be limited to the reddened skin alone, as is especially the case when the disease is met with at its beginning, or is beyond the boundaries of the inflamed spot. In general one may suspect that the infection has overleaped the apparent limits, if from the first there be symptoms of any gravity, as high fever, headache, burning thirst, and vomiting. Besides these phenomena in such cases the apparently normal skin will be found on a pressure to be painful, which pain will be more striking if pressure be made upon the inflamed focus. In other cases isolated inflamed spots, of the size of a franc piece, will be discovered scattered here and there on the surface of the normal skin; these are also sensitive to pressure and already foci of infection. As one withdraws from the central infected and inflamed spot the cutaneous painfulness on pressure decreases gradually until where it ceases one may assume that healthy skin is reached. Hence, if one would stay the progress of the disease these outrunning points of infection must be sterilized. Therefore this method of abortive treatment consists in carefully recognizing latent infection in order to combat it as quickly as possible. Any suitable antiseptic may be used. The writer employed solutions of carbolic acid and alcohol, carbolic acid and glycerin in equal parts and finally, in those cases where this remedy is not well borne, he recommends the following:

℞ Hydrarg. chlor. corrosiv., ... 0.03 grams.
Glycerin . . . . . 30.00 "
For external use.

All these three solutions are to be applied locally by means of a small brush. This same treatment is also useful in lymphangeitis.

QUININE ALBUMINATE.

A preparation described as being a homogeneous compound of egg albumen with quinine, possessing the remarkable property of not being decomposed by the strongest alkalies, has recently been introduced by M. Tarozyi (*Union Pharm.* May, p. 196). It is claimed that the preparation is easily absorbable by the mucous membrane of the stomach and passes into the circulation, where it exercises its therapeutic properties without undergoing decomposition, under conditions in which the ordinary salts of quinine are broken up by the alkaline liquids of the system. This "albuminate of quinine" is stated to be prepared by double decomposition between sulphate of quinine and albuminate of soda, but the manner of operating is not indicated. The product is a white amorphous bitter substance, said to contain fifty-six per cent. of quinine; it is alkaline in reaction, dissolves more readily in hot water or alcohol than in cold, and more freely still in water acidulated with lactic or hydrochloric acid. It may be distinguished from other salts of quinine by treating it with water, acidulated with sulphuric acid, which forms with the quinine soluble acid sulphate, the albumen being precipitated after standing.—*Pharmaceutical Journal and Transactions.*

CARBOLIC-ACID SPRAY IN LYMPHANGEITIS.

"Dr. E. Schwartz reports two cases of very severe lymphangeitis with diffuse cellutis of the lower limbs, which he treated successfully by Verneuil's method of keeping the parts under prolonged and frequently repeated applications of carbolic spray. The following is the mode of procedure: The limb is placed on some impermeable material in

such a manner that the spray can run easily off the part; the rest of the body and the bed are protected with mackintosh. One or two spray producers, filled with a watery solution of carbolic acid from 1 to 40 to 1 to 80, are then placed at a distance of about a yard from the part to be acted on, and allowed to play on it for an hour or an hour and a half, two or three times a day. Signs of carbolic poisoning must be carefully looked for, and in any case the strength of the solution and the length and frequency of the applications must be diminished as the inflammation subsides. This treatment should be combined with free incision and with wet antiseptic dressings. The patient's strength must, of course, be supported by the proper constitutional treatment. Used in this way, M. Schwartz says the method has an excellent effect, rapidly checking and modifying serious septic processes. He compares the action of the spray to that of a prolonged antiseptic bath, and he thinks it indicated in all cases in which continued local immersion is impracticable."—*British and Colonial Druggist.*

DIURETIN AS A DIURETIC.

Dr. Robt. H. Babcock, in a paper in the *N. Y. Med. Jour.* reaches the following conclusions:

1. Diuretin (Knoll) is a diuretic of great power and promptitude, suitable to all forms of dropsy.
2. Not increasing arterial tension, it is likely to succeed where digitalis, caffeine, and their congeners fail.
3. In cases of cardiac dropsy, with great feebleness of the pulse and arrhythmia, it will strengthen and regulate, rather than depress, the heart's action.
4. It appears to cause no irritation of the stomach or kidneys.
5. It requires to be given to the extent of from ninety to one hundred and twenty grains daily, and preferably in small doses frequently repeated.
6. It is best administered either in solution in warm water or in gelatin-coated pills, since, if exposed to the air in powders, it undergoes change, with a precipitation of much of the insoluble theobromine.

FUMES OF THE BROMOHYDRATE OF AMMONIUM IN ASTHMA.

Being familiar with the favorable action of the fumes of ammonium chloride in some forms of bronchitis and naso-pharyngeal catarrh, the idea suggested itself to Dr. Maxwell to test the fumes of the bromide of ammonium in asthma (*Journal de Médecine de Paris*, May 31, 1891).

To obtain these fumes he employed bromohydric acid of a specific gravity of 1.7, and it is stated that but few inhalations are required to cause the immediate disappearance of the dyspnœa, while sometimes, he writes, by causing the inhalations to be used at the time a dyspnœic attack is threatened the asthmatic seizure has been entirely prevented. In order that the fumes should have a neutral reaction they should be passed through a wash-bottle.

PARALDEHYDE IN TETANUS.

Dr. V. E. Ignatieff (*Gazzetta Medica di Roma*) proceeding from the experience of Russmant, Nopoff and Cervello, according to whom paraldehyde acts upon the nerve centres as well as upon the peripheric nerves, the writer prescribed it in two cases of tetanus (a boy of fourteen years and a woman of twenty-nine). Chloral had already been given in large doses without result. Paraldehyde was administered by the mouth and rectum, in daily doses of 3.75 to 9.40 grammes in the former (95.68 grammes in nineteen days), and 15 grammes in the latter case (450 grammes in thirty days). Both patients recovered completely. No disagreeable secondary action of the drug was observed, which occur so frequently after the administration of chloral in large doses. Dr. Tchervinsky communicated a case of tetanus to the writer which was also successfully treated with paraldehyde. Therefore, the author warmly recommends this method of treatment. The drug not only causes the convulsions to disappear, but also at the same time diminishes the pain, quiets the patient, combats the insomnia and permits the patient to be fed, thus giving the organism the possibility of eliminating the virus produced by the pathogenic microörganism circulating in the blood.—*Jour. Nerv. Ment. Dis.*

ERUPTIONS DUE TO SALICYLATE MERCURY.

At a meeting of the Russian Syphilidological and Dermatological Society, Dr. Flitner of St. Petersburg communicated five cases, referring to syphilitic women in whom intragluteal injections of Salicylate of mercury (1½ grain ever fourth day) caused more or less intense cutaneous lesions. Drug eruptions of late having attracted consider-

able attention, the following condensed account may be of interest:—In one of the patients, aged 28, the first injection was rapidly followed by rigor and fever, with a bright confluent erythema over the flexor aspect of the upper limbs, and the whole circumference of the lower. On the next day the chest and epigastrium became involved, while over the whole affected surface there cropped out numberless vesicles, closely resembling miliaria crystallina. On the fourth day, the erythema assumed everywhere the shape of "almost regular geometrical figures," such as aces of diamonds (on the forearms), oblique crosses (on the chest), &c. On the fifth, there appeared erythematous patches on the face, abdomen, back and buttocks, while the older rash became livid, and here and there brownish, the vesicles at the same disappearing. On the eighth day, the eruption began to subside; on the twelfth, a furfuraceous desquamation set in, being especially pronounced on the limbs.

In another woman, aged 18, on the day following the first injection, the back, chest and abdomen were found studded with dark, dusky, and bluish-brown, circular and rhomboid spots, varying in size from a small pea to a large almond. A few days after the second injection, there supervened rigor and fever, headache and giddiness, accompanied by the eruption of rose and red lenticular papules over the upper and right lower extremities, most of the patches presenting on their summits two or three vesicles with a serous discharge. In the course of the subsequent eight days, fresh papules continued to come out (mainly on the right limbs), while the old ones gradually disappeared, leaving no trace. The primary pigmentary rash left some discoloration.

In a third patient, aged 26, on the day following the second injection, there was observed bright erythema (with minute vesicles) on the back, which was followed by the appearance of slightly itching, sharply circumscribed, particularly bright red patches on the limbs and buttocks. The rash disappeared on the fifteenth day.

In a fourth woman, 22 years old, on the following day after the first injection the whole body became covered with regular oval erythematous patches, the exanthem lasting only two or three days. No rash occurred after subsequent injections.

In the fifth patient, aged 20, the first injection was similarly followed by the development of erythematous patches, which, however, were limited to the lower half of the back, inner surface of the forearms, and face, the skin returning to normal condition in about six days.

In the course of discussion, Dr. Usass said that he had also seen several cases of erythema following mercurial injections. In one of his patients, the whole body turned red within six days, the integument showing areas of serous infiltration. In a fortnight a profuse desquamation ensued, the cuticle being shed in large sheets. The rash was accompanied by high fever (up to 40° C.) the patient's general state remaining rather grave for some time. Ultimately (in about four weeks), however, he made good recovery.

Dr. Stepanoff similarly adduced two cases of mercurial erythema, the rash lasting in one for two months, in the other a fortnight. In the former it disappeared spontaneously after discontinuing the treatment; in the latter it was cured by iodide of potassium.

Dr. Telistiakoff related a case of mercurial exanthum resembling erythema exudativum multiforme, and chiefly involving the forearms, chest, abdomen, and lower limbs. It re-appeared after each of the first three injections of the salicylate, lasting each time for about two and a half days. Subsequent injections did not produce any eruptions. —*Jour. Cut. Dis.*

MEDICINE.

CHRONIC INTERSTITIAL MYOCARDITIS.

After reviewing the history of this subject, MM. Bard and Philippe discuss (*Revue de Médecine*, May, 1891) its pathological anatomy, pathogeny, and etiology. Moderate hypertrophy of the heart is a constant phenomenon, with dilation of its cavities, particularly of the left ventricle. On section, the color varies according to the degeneration of the muscle. The thickness of the ventricular wall is not uniform; it is more especially thin at the apex. The interstitial change is visible to the naked eye in lines or *plaques*. The papillary muscles are particularly affected. Whenever cardiac hypertrophy is present with no valvular disease, myocarditis should be thought of. Microscopically, the patches of sclerosis are made up of bands of fibrous tissue, and the muscular elements are atrophied. If the process is rapid, cellular elements predominate. In the *plaques*, the vessels show a periarteritis; elsewhere there is no constant change found in them. The authors do not believe the disease to be of

vascular origin, for the inner coat of the vessel is healthy. In the other viscera the effects of chronic congestion are seen. Many confound this interstitial myocarditis with the sclerosis set up by vascular disease. In the senile heart like changes arise, due to progressive obliteration of the small arteries. As to atheroma affecting the large branches of the arteries of the heart, most often one of the chief trunks near its origin is involved, from which a true angina pectoris may result. Rarely a branch may be completely obliterated, giving rise to necrotic foci. This interstitial myocarditis is not due to hypertrophy the result of valvular disease, for the latter is seldom present. Nor is it the outcome of renal disease, for in purely primary forms of nephritis this diffuse interstitial myocarditis is never seen. Nor is it due to diseases of the lungs, for then the right side of the heart would be chiefly affected. It is really a primary myocarditis. The changes in the muscular fibres are degenerative, without any signs of inflammation, whereas those in the interstititial tissue are active. Thus the changes in the latter are primary. In the course of infective diseases inflammatory lesions are apt to take place in the interstitial tissue, and these may become chronic. Two sets of agents may set up this inflammatory sclerosis of the myocardium: (1) intoxications from alcohol, lead, gout, etc., and (2) infective diseases—enteric fever, diphtheria, pyæmia, eruptive fevers, syphilis, though here the pure interstitial myocarditis must be distinguished from the sclerosis due to syphilitic endarteritis and tubercle. Rheumatism, which may in any of its forms set up myocarditis, occupies as it were an intermediate position between these two classes of diseases.—*Brit. Med. Jour.*

EPILEPSY OCCASIONED BY AN IMPERFORATE HYMEN.

Dr. Somers reported in the *Lancet* an interesting case, re-capitulated in *La Revue des Sciences Medicales*. It occurred in a patient who had already suffered with epileptic attacks for three years. They had been preceded for a year by malaise, headache, anorexia, pain in the belly recurring each month. At first they occurred at intervals; afterward, toward the close they returned with increasing frequency. All the characteristics were those of ordinary epilepsy, and Somers, considering the age of the patient (twenty one years) and the absence of catamenia, at first thought it was a case of pregnancy in an epileptic, but an examination made by him detected an imperforate hymen. An incision of it permitted the escape of thick and sanious pus. Afterward the catamenia were re-established and her general condition was good. No recurrence of the attacks had taken place fourteen months thereafter.

ALBUMINURIA IN DIABETES.

The occurrence of albuminuria in diabetes has been known for a long time, but its frequency is a point authorities differ upon. Sir Alfred Garrod found it in about 10 per cent. of the cases; Von Duich in nearly 25 per cent.; Dr. R. Schmitz, of Neuenahr, in a recent paper puts it at a much higher figure. Of twelve hundred cases of diabetes in which the urine was examined as to the presence of albumen, in no fewer than 824 was it found in quantity varying from a trace to as much as 0.9 per cent. There is as much difference regarding its significance. The opinion was once current that the appearance of albumen in the urine gave to the prognosis a most grave aspect, and even now the view that the prolonged polyuria and continuous irritation of the kidneys may develop a parenchymatous nephritis is held to some extent. Frerichs doubted this, and was inclined to look upon the existence of complications such as tubercle, cardiac disease, and arterio-sclerosis as the cause. Both Frerichs and Senator regarded the occasional œdema of the ankles and face as an expression of the general exhaustion, not the result of nephritis; and the latter thought that the condition produced by diabetes re-acted upon the renal epithelium, which allowed the percolation of albumen. Schmitz does not regard albuminuria as of grave significance, provided there are no other signs of organic disease of the kidneys and no complications are present. Should nephritis be ascertained to exist, he thinks, it is most probably the result of some complication. He has seen patients live for many years who were known to have diabetes and albuminuria; one case going on for fourteen years and in good health still. Dropsy is rarely observed, and cases described as dying of uræmia are probably confounded with diabetic coma. Of 206 patients suffering from diabetes of more than two years' standing, only four had albumen absent ftom the urine. With regard to the origin of the albumen, Schmitz holds that the long continued ingestion of large quantities of albumen plays a very important part, and added to this may be vesical catarrh, which occurs readily from the decom-

position of saccharine urine.—*Berlin Klin. Wochenschr.*

THE ACTION OF ANTISEPTICS UPON THE PERITONEUM.

Delbet, Grandmaison, and Bresset (*Annales de Gynecologie et d' Obstetrique*, 1891) as a result of their united experiments and observations, arrive at the following conclusions:

1. The strong antiseptics, such as carbolic and salicylic acids, corrosive sublimate and biniodide of mercury, present more disadvantages than advantages, since they irritate a healthy peritoneum and thus favor the formations of adhesions.

2. The most useful solutions to be employed in laparotomy are one of sodium chloride (six or seven parts to one thousand), and of boric acid (three parts to one hundred).

3. Iodoform and salol exert but little action upon the peritoneum, and it is a question if they have any antiseptic effect.—*Amer. Jour. Med. Sci.*

INFLUENCE OF SEX IN EAR DISEASE.

Dr. Loewenberg, of the city of Paris, discusses the influence of sex in what he calls the "laterilization" of ear disease. After referring to the view generally held by otologists that the left ear is more liable to be attacked alone, or to be attacked first and to suffer more severely when both ears are affected, he says that he has for a long time past been struck with the fact that, while deafness is more common on the left side in men, the same does not hold good in the case of women. From statistics of 3,000 cases (not including diseases of the concha and external meatus) which have come under his own notice, he shows, in the first place, that the male sex is more subject to ear disease than the female, there having been 1,790 of the former to 1,210 of the latter. Among those in whom only one ear was affected there were 478 men and 311 women. The right ear alone was affected in 212 men and 167 women; the left alone in 266 men and 144 women. Deafness existed in both ears in 1,074 men and 737 women. Among this number the right ear was the more deaf of the two in 427 men and 340 women, the left in 647 men and 397 women. Deafness was equal on both sides in 238 men and 162 women.—*Brit. Med. Jour.*

ACUTE ŒDEMA OF THE SKIN.

Barduzzi (*Giorn. Ital. delle mal. ven. e della pelle*, 1890, No. 3) considers that there is not sufficient reason to separate acute œdema of the skin from urticaria. Of three cases of acute œdema which he relates, the third was the subject, after an acute gastralgia, of diffuse papular urticaria. After the second gastralgic attack she had acute œdema of the face and hands. In the latter condition he recognized what he considered to be an atypic urticaria œdematosa.—*Brit. Med. Jour.*

REGENERATION OF HAIRS AFTER EXTRACTION.

Giovannini *Giorn. Ital. delle mal. ven. e della pelle*, 1891, No. 1, 1891) found that usually when a hair is extracted the external root sheath is not removed, and a considerable part even of the inner root sheath remains in the follicle. The formation of new hair begins about the forty-first and seventy-second day after depilation, and takes place from the epithelial cells, which had been retained in the follicle.—*Brit. Med. Journ.*

SENSORY AND VASO-MOTOR DISTURBANCES IN CASES OF RHEUMATIC FACIAL PARALYSIS.

In the K. K. Gesellschaft der Aerzte in Wien, on 19th April, Hr. v. Frankl-Hochwart gave an account of twenty cases of facial paralysis which he had had under his observation. In ten cases there were neither sensory nor vaso-motor disturbances; in two there were both; in five there were sensory; and in three there were vaso-motor. The altered sensibility was in many cases complained of by the patients themselves, and confirmed by examination, including testing of the appreciation of heat and cold. It was never great, and sometimes involved not only the skin, but also the buccal and lingual mucous membrane. The sense of taste was in a few cases likewise diminished. The vaso-motor disturbances gave rise not only to alterations in the color of the affected side of the face, but also to raising of the temperature of the part.

These disturbances usually manifested themselves with the paralysis, but disappeared after a week or two, the paralysis persisting longer; in one case, however, in which the paralysis was of several years' standing, the loss of sensibility continued.

In explanation of such cases it is assumed that the facial nerve contains vaso-motor and sensory fibres; and, in support of this theory, cases in which herpes accompanies facial paralysis are alluded to as implying

that the nerve is supplied with trophic fibres.—*Deut. Med. Zeitung*, 30th April, 1891.

THE RISE OF TEMPERATURE IN THE EPILEPTIC ATTACK.

In his wide experience of epilepsy at the Bicetre, M. Bourneville has spent much time in the study of its effects on the temperature, and has come to the conclusion that it always raises the temperature a little at the time of the attack. In the case of single isolated fits the rise was always clearly perceptible—on an average of about 1° F., and sometimes as much as 3° F.; in a series of ten or twenty fits it was on an average larger, about 1·5° F.; and in cases of *status epilepticus* there was frequently a temperature of 105° and sometimes 108°. M. Duflocq has recently published a few cases of "partial epilepsy of subcortical origin" (*Revue de Med.*, February, 1891), in which only a few observations showed any rise of temperature, which was claimed abnormal. These have led M. Bourneville to repeat some of his previous lengthy and careful observations. Selecting sixty-seven patients in whom there were single isolated epileptic attacks, he has taken the temperature in each: (*a*) during the stertor immediately succeeding the convulsions; (*b*) a quarter of an hour later; and (*c*) two hours later. There is a uniformity in his results which is remarkable. In none of the cases is the temperature at the time of the attack as low as normal, and in none is the temperature not lower two hours later. The average (*a*) in the period of stertor is 100·5°, (*b*) a quarter of an hour later is 100°, and (*c*) two hours later is 99·3°. In nine other cases the rise of temperature culminates at (*b*) 100·5° rather than at (*a*) 99·8, but sinks at (*c*) to 99·4°. In that second class of cases in which there are series of attacks with short periods of consciousness between each, M. Bourneville's old observations are found to repeat themselves in four new cases. The temperature after the series of attacks rose on an average to 102·1°, and then fell after eighteen hours to 100·3°. In the third class, consisting of four cases of *status epilepticus* which all ended fatally, the rise of temperature was not quite regular during the three or four days that the condition lasted, but rose in all cases over 105°, and in one case touched 108·4° just before death.—*Revue de Med.*

SURGERY.

EFFECT OF QUININE ON THE HEALING OF WOUNDS.

Dr. Sokoloff has recently published in the *Lancet* some interesting observations on the effect of quinine administered to a wounded animal on the granulation and cicatrization of the wound. The experiments were conducted on rabbits. The fur was shaved from a portion of the paw, and an incision made through the skin and into the muscular tissue, the external wound being then sewn up and the whole dressed antiseptically. Subsequently microscopical observations were made on sections including the wound. Twenty-four rabbits which were experimented on in this way were treated with hydrochlorate of quinine, half a grain of which was given per diem for each kilogramme of body weight. A similar number of control rabbits were operated upon in precisely the same manner, but were not given quinine. The author gives a detailed description of the microscopical appearances observed each day for eight days in the two sets of cases. The effusion of blood was much the same in both, but there was a marked difference in the condition of the muscular tissue. In the control animals this lost its striped character, the portions in the immediate vicinity of the wound presenting the appearance of an amorphous homogeneous substance containing here and there a few muscular fibres or breaking up into separate pieces as in coagulation necrosis. Besides this, the muscular tissue gradually disappeared, leaving sheaths of sarcolemma either empty or filled with cells. In contrast to this state of things sections taken from the animals treated with quinine presented little or no sign of muscular degeneration, the fibres preserving their proper structure. With regard to the cellular elements in the control animals, two forms were found in the neighborhood of the wound—a large number of multinuclear leucocytes, and a much smaller number of large round or oval cells with a single large nucleus. During this period the nuclei presented various karyokinetic figures. In animals treated with quinine there was no multinuclear cells, all being oval, with a single nucleus and smaller than the corresponding cells in the control animals. The cells were, moreover, more numerous than in the control observations. In the quinine-treated animals the karyokinetic process commenced and finished

earlier than in the others, the chromatin filaments being also less numerous but thicker. Altogether there was less inflammation with quinine than without; in short, without quinine there was Zenker's degeneration, with quinine, none.

TREATMENT OF ORCHITIS BY REFRIGERATION.

In his inaugural thesis Dr. De la Valle reports the results of the treatment of orchitis employed in the service of Dr. Du Castel (*Journal de Médecine*, April 10, 1891). This process consists in painting the scrotum with a camel's-hair pencil dipped in the chloride of methyl, the operation to be repeated twice daily. It is stated that immediate and considerable relief ordinarily follows the very first application, even in cases where the inflammation is violent, and where the patients hitherto have been confined to the bed. The average duration of the treatment was seven and a half days; the average time the patients remained in the Hospital eleven and a half days. This treatment is extremely simple, and does not necessitate the employment of any other medical treatment whether internally or by external application.

A HUNDRED CASES OF ENTIRE EXCISION OF THE TONGUE.

A valuable paper by Whitehead on excision of the tongue appears in the *British Medical Journal* for May 2, 1891.

In the last twenty years the writer has operated for cancer of the tongue in 139 cases. Of these 104 were complete excisions, and 25 were partial operations, the mortality in the former being 19.21 per cent., while in the total number of cases it was 14.3 per cent. When the tongue alone was excised the death-rate was 4.5 per cent., and when glands and jaw were also removed it was 77 and 57 per cent. respectively.

He has not selected his cases, and has never allowed the extent of the disease or the emaciated condition of the patient to deter him from operation when there was any prospect of either prolonging life, or of affording even but temporary relief.

The essential details of Whitehead's operation are: 1. That complete anæsthesia during the first stage of the operation, but afterward only partial insensibility, is to be maintained. 2. The mouth must be securely gagged, and kept fully open. 3. The head should be supported in such a position as will afford the best light, and at the same time favor the gravitation of blood out of the mouth rather than into the pharynx. 4. A firm ligature must be passed through the tip of the tongue for the purpose of traction. 5. The division of the reflection of mucous membrane between the tongue and jaw and the anterior pillars of the fauces. 6. Rapid separation of the anterior portion of the tongue from the floor of the mouth. 7. Securing, if possible, the lingual arteries prior to division. 8. Passing a ligature through the glosso-epiglottidean fold, before finally separating the tongue. 9. The application of a mercurial solution to the floor of the mouth, followed by painting the surface with an iodoform styptic varnish. The cutting part of the operation is done entirely with scissors.

The writer does not advocate preliminary tracheotomy, and believes that it is possible to guard against the entrance of blood into the lungs by means involving much less risk than either tracheotomy or laryngotomy. He thinks it important that the patients should be made to sit up from the first and not kept in bed. The average time of convalescence he has found, under these circumstances, to be seven days.

In regard to the predisposing and exciting causes of the disease, it was found that in 104 cases a family history of cancer could be definitely traced in but six, and in seven others it was doubtful. In sixteen instances the disease was attributed to injury; 61 of the patients were smokers, and in the majority of these the disease began on the side on which the pipe was habitually held. Irritation from teeth was the exciting cause in 33. One patient had never smoked, and had not possessed a tooth for twenty years.

As to the duration of life after the operation, information was obtained in 61 cases. Fifteen lived for one year; four two years; two three years; four five years; one six years, and one patient survived the operation for fourteen years, although 62 years old at the time it was performed.

In conclusion, Whitehead lays great stress on the importance of the removal of the disease at the earliest possible moment after its discovery.—*Univ. Med. Mag.*

SHOCK.

Dr. Hunts, in the *Med. Record*, says: In the treatment of shock we must keep constantly before us the condition of the pulse, respiration, and temperature, and our efforts to be directed toward their improvement. Warmth,

in the form of a hot bath, or of hot plates, bottles, irons, etc., applied to the chest, abdomen, and extremities, is of prime importance. Even when life seems to be extinct, as in the case of a boy whom I had trephined for a crushed skull, reaction may sometimes be brought about by wrapping the patient from head to foot in a flannel blanket wrung out of water as hot as the hands can tolerate.

Stimulants are indicated from the start and should be persisted in until reaction has begun, when they must be diminished or administered in conjunction with nourishment either by the stomach, or when this will not retain it, by the rectum. I believe that the danger of over-stimulation is genuine, not on account of any fever which may ensue, but rather lest the enfeebled heart may succumb to the excessive demand made upon it. Of all the stimulants recommeded the greatest hope is to be placed in brandy or whisky, then digitalis, and then strychnine, all to be given hypodermically or by the rectum. Brandy and whisky can be given in syringeful doses repeated very frequently, digitalis in ten-minim doses of the tincture or one-sixtieth grain of the alkaloid and strychnine in one-thirtieth or one-fifteenth grain doses, though not repeated so often.

Verneuil recommends injections of ether at times an excellent stimulant. Carbonate of ammonia is valuable and may be given subcutaneously. Morphia and atropia are of great value when restlessness of delirium is present and should never be withheld in such cases.

Artificial respiration will often prolong and sometimes restore life and should be resorted to in suitable cases. Bleeding from the external jugular has been recommeded, where that vessel is found distended with blood, with the hope of relieving the engorgment of the heart and thus stimulating it to action, but it must be remembered that the paralysis of the heart is not due to its engorgement, but that this condition is rather dependent upon the paralysis, making the operation one of doubtful expediency.

Transfusion may, possibly, be of service when there has been loss of blood, in which case a weak saline solution will be quite as efficient as blood itself.

But little can be done to relieve the excessive irritability of the stomach, except to withhold absolutely everything from it. The patient's lips may be moistened, but nothing must be swallowed, and the extreme thirst may be slightly relieved by rectal injections of milk or water. A mustard plaster applied over the stomach sometimes seems to give relief.

ON THE PRESENCE IN URINE OF A SUBSTANCE RESEMBLING SUGAR IN ITS REACTION.

Dr. Cleghorn says that during the last two years he has come across three cases in which for a short time the urine contained a substance which reduced cupric sulphate, and produced the usual re-action of sugar with liq. potassæ and picric acid. The specific gravity of the urine in these three cases varied from 1024 to 1030; in each case the breath had the peculiar odor which can be noticed when patients are taking medicine flavored with chloroform. In the first case the patient was suffering from exophthalmic goitre, aged about 27, and earned her living as a printer in a newspaper office. In her case the substance was present in the urine for a fortnight. She had been suffering from exophthalmic goitre for four months, gradually going from bad to worse. At that time she was very ill, and almost confined to bed. Soon after she began to improve, and six months later was able to resume work. He does not think treatment influenced the progress of the disease in her case. The other two cases occurred in little boys aged 3 and 5 respectively, and in both the symptoms were very much alike. They were both suffering from what seemed rather severe attacks of gastric disturbance, and in both the substance was only found in the urine for three days. They were more than usually prostrated after the attacks passed off, but in a fortnight had returned to their usual standard of health. Some cases of this nature were reported in the *British Medical Journal*, vol. i., p. 169 (1890), by Dr. Ashdown, who says this substance can only be distinguished from sugar by the fermentation test. He proposed to call the substance glycuronic acid. As Dr. Cleghorn has come across these three cases in so short a time as two years, the condition must be far from rare, and its recognition may make the prognosis more guarded in cases of supposed glycosuria with urine of a comparatively low specific gravity.—*New Zealand Med. Journ.*

GYNÆCOLOGY.

THE TREATMENT OF AMENORRHŒA BY SWEDISH MOVEMENTS.

Thure Brandt treats this affection by

Swedish movements, without massage or any local treatment whatsoever, the exercises being of the kind called "congestive" to the pelvic organs. Of these there are two varieties, the one consisting of movements performed by the patient alone, the other requiring an assistant. There are ten of the first variety, which are to be practiced once a day in regular order, a rest of five minutes being taken between each movement. The exercises are as follows:

1. Elevation of the arms, and deep respiration in a walking position. To be done five or six times.
2. Rotary movements of the feet in a semi-prone position.
3. Lateral flexion of the trunk, in standing position, feet far apart, arms uplifted.
4. Bending and unbending of the knee in a standing position.
5. Flexion of the body forward and back, standing position, feet apart, arms lifted.
6. Circular movement of thigh in an upright position.
7. Running movement without leaving the spot, knees lifted high.
8. Circular motion of the trunk in upright position, feet apart.
9. Abrupt backward motion of the trunk in a kneeling position, the knees apart.
10. No. 7 done very slowly.

The movements requiring an assistant are divided into the feebly and the strongly congestive. There are nine of the first class, consisting of motions of head and arms, flexion of leg and foot against the resistance of the assistant, percussion of back, circulatory motions of trunk, torsion of the body in the sitting and kneeling positions, elevation of the chest by the assistant, the patient lying down.

The strongly congestive movements include five of the first list in a little different order, and three new movements, viz., lateral movement of the uplifted arms by the assistant, the patient resisting, followed by action on the part of the patient, the assistant resisting; bending and straightening the knee in an upright position against the resistance of the assistant, and a circular movement of the thighs. The ideal treatment for amenorrhœa would be the execution of these movements, one after the other, without fatiguing the patient. As this is usually impossible, a judicious choice should be made, adapting the movements to the condition of the patient. Feeble and anæmic subjects should perform the easiest exercises only, and begin with a few at a time.

OBSERVATIONS ON THE CHANGES IN SIZE AND CONSISTENCE OF THE FEMALE PELVIC ORGANS.

Lindblom (*Ctrlbl. für Gyn.*, No. 3, 1891), who employs pelvic massage extensively, has observed almost constantly during the séances changes in the pelvic organs, especially in the uteri.

In the most marked cases the uterus at the beginning of the séance is small, lax, and soft; it then increases in size, grows harder, and assumes a spherical form. These changes are noticed principally in the body and supravaginal cervix. The author attributes them to changes in the blood-supply of the organs and compares them to erections. The woman, however, experiences no sensations from these changes. The author has also observed that the swollen uterus just before the menstrual period diminishes in size as soon as the blood begins to flow, and the uterus grows flaccid and soft, the decrease in size and flaccidity being in direct ratio to the abundance of the flow. The ovaries decrease in size also on the appearance of the menstrual discharge.

NOTE ON THE VALUE OF PEROXIDE OF HYDROGEN IN GYNÆCOLOGY.

The value of peroxide of hydrogen as a detergent and purifier has long been known, and when applied to dressing foul ulcers (syphilitic or otherwise) has given good results. Some time since, Dr. Alexander Duke, while treating a case of sepsis in which pus was freely discharging from abraded surface on vaginal wall, thought he would try the effect of peroxide. He had previously had the part twice daily syringed with weak solutions of carbolic acid, iodine, sanitas, and Condy's fluid without much effect. He found the solution of peroxide act as a charm in checking the secretion gradually, cleansing and healing the abraded surface, and producing no irritation; and he ventures to suggest it as a suitable application, more especially to the female genital tract. One teaspoonful added to half a pint of warm water gradually increased in strength will, he feels sure, be found a valuable addition to the many antiseptics used in such cases. He also suggests that in all cases where there are symptoms denoting septic absorption during the lying-in period a close examination of the vaginal walls and cervix uteri for tear or abrasion should be made, and, when discovered, the part thor-

oughly cleansed and cauterized with strong carbolic acid. He believes he can attribute the recovery of more than one patient, whom he had been called to see in consultation, to the adoption of this plan. But he much prefers the prevention of such accident by flushing the uterus with hot water directly after labor, examining at the same time for any tear or injury, and cauterizing or suturing the surface then and there.—*Lancet.*

CLOSURE OF CERVICO-VESICO-VAGINAL FISTULA FROM THE SIDE OF THE BLADDER.

Baumm (*Archiv. für Gynäkoligie*, Bd. xxxix. Heft 3) reports an interesting case in which he followed Trendelenburg's suggestion to close complicated fistulæ by exposing and incising the bladder, as in epicystotomy, and suturing the edges of the fistula from within. The patient had had extensive sloughing after a tedious labor, as a result of which there was a large cervico-vesical fistula with extensive cicatrization involving the entire vaginal fornix, so that it was impossible to expect a successful result from a plastic operation. The patient was placed in Trendelenburg's posture. A median incision was made just above the symphysis, the pre-vesical space was exposed, and the bladder was opened by a transverse incision two inches and a half in extent, through which the interior of the viscus could be thoroughly inspected. The mouths of the ureters were surrounded by the cicatricial tissue at the edge of the fistula, but were located by passing a probe into them. The borders of the fistula were denuded, an assistant aiding by making pressure upon them *per vaginam*. Eight silk sutures (having a needle on each end) were passed down into the vagina, where they were drawn through by the left hand of the operator, and subsequently tied with the aid of a Simon's speculum. The upper wound in the bladder was closed with a double row of sutures, muscular and sero-serous, a T-shaped drainage-tube being inserted. After tamponing the pre-vesical space with iodoform gauze, the abdominal wound was closed. The patient had a tedious convalescence, and six weeks after the operation there remained a large fistula at the site of the abdominal wound which never closed. It was necessary to perform a slight secondary operation in order to completely close a small cervico-vesical fistula.—*Amer. Jour. Med. Sci.*

OBSTETRICS.

A CASE OF INTRA-UTERINE FRACTURE OF BOTH THIGHS—TREATMENT.

Dr. P. J. Farnsworth, reports in the *Annals of Gynæcology and Pædiatrics* an interesting case of this character: Mrs. S., aged 25 years, in fair health and of good constitution, was taken with her first labor August 19, at 4 A. M. Dr. G. A. Smith was called. Labor progressed favorably until 7 A. M., when dilatation had taken place sufficiently for examination. At first he was unable to make out the presentation, but a severe pain coming on the membrane ruptured, and he found it was the breech. Soon, in the midst of a strong pain, a distinct crackling sound was heard, like the breaking of a large twig, and in a few seconds it was repeated. The noise was easily heard by all in the room. Mrs. S. was very much frightened, became faint, and all pain ceased. I was then called in; an hour had elapsed and no symptoms of pain. Made an examination and found the breech engaged with the sacrum to the left acetabulum. After administering some stimulants and assuring the patient that everything was all right, the pains returned and proceeded regularly but slowly. Soon the body was born, and with a little delay the head was extracted. There was only a flutter of the heart and no respiration. Chloroform had been administered pretty freely during the last stages. The cord was tied and means used to resuscitate the child, which after some time was accomplished.

The child was a female of fair size, but thin and wrinkled as if it had been plump and then had fallen away. It weighed nearly seven pounds. On examination we found both thighs fractured, the right one in two places near the lower third, the left one above the upper third. The child was washed and laid on a pillow until afternoon, when we found her breathing well and making an attempt to nurse. We cut three pieces of paste-board from a paper-box cover; two as long as the legs from the foot to the perinæum; the third a little wider, reaching well up to the body. Wrapping the extended legs in several folds of cotton we put the roller bandage around them pretty firmly, carrying it around the abdomen so as to catch the upper ends of the outside splints. The dressing was found very loose after two days and was removed. We now found that the muscles resisted extension with no little force, which was overcome by ele-

vating the legs at a right angle with the body. Again applying the folds of cotton, we put on a plaster-of-Paris bandage, covering the legs with several thicknesses and placing them against a cushion to keep them up.

The mother had a full supply of milk, and the babe grew rapidly, apparently paying little attention to its unusual condition, being less fretful than many other children of that age generally are. On the 26th we found the feet showing some signs of constriction and removed the dressing. The shrunken, flabby look had given place to a full plump appearance, the bones were united, with very decided callus. We brought the limbs down carefully, made extension and then reapplied the plaster bandages, putting them again in the upright position, soles toward the ceiling. At the end of three days there was some irritation around the top of the dressing and the circulation a little languid in the feet. The bandages were taken off, the union was firm, with large callus. There was still muscular resistance to extension. We procured a thin board as long as the child, cut it into a fork at the lower part, padded it well and laid the child on it, drawing down the legs and bandaging them to it from toes to hips, and a wide band around the abdomen and stomach. It resembled an Indian papoose in full dress. This was done partly to get full and equal extension of the limbs, and partly for the convenience of the mother, whose circumstances rendered it necessary to make a journey of fifty or sixty miles on the river. The mother and nurse are willing to testify as to the ease and safety of this aboriginal means of dressing a baby when a journey is required.

On their return on the twelfth day we removed the last dressing, and found firm union with considerable lateral curvature. We next applied a firm felt splint, curved partly round the legs, but not covering them. These we fastened on with a roller bandage with considerable force, removing them each day and applying compresses of cotton where we wished to remedy a crook. On the eighteenth or twentieth day we removed all the dressings and allowed the nurse to put on "baby's long clothes." To all appearance the limbs were of a length and without deformity, except the rings of callus at the points of injury. Motion in all the joints perfect and of fair proportions. At this writing, five months from birth, no signs of injury can be detected,—a plump, well-formed baby as can be found anywhere.

I have given this case with more detail, inasmuch as we could find no mention of any treatment for such a case, and only mention that intra-uterine fracture did sometimes take place. We notice how quickly infantile lesions are repaired, also how easily deformities may be corrected, and observe in passing that many bow-legged people may have been made so by thick diapers and faulty dressing during the first weeks of life.

A NEW METHOD OF INDUCING PREMATURE LABOR.

Dr. Schrader, of Hamburg, has published a new method of inducing premature labor based on his observations that cold is a greater excitant of the nervous, and consequently also of the muscular system than warmth. Continuous irrigation at the temperature of 45° Fahrenheit is impracticable on account of the pain it causes, but a cold douche alternating with a warm one can be borne. Dr. Schrader connects a vaginal glass tube by means of a T-shaped piece and the necessary india-rubber tubes to two irrigators, one of which contains the cold and the other the warm water. By allowing now one instrument and now the other to work, cold or warm water may be sent through the vaginal tube into the vagina. Two people are required—the one to fill the irrigators, the other to work the douche. For each sitting about twenty-four litres of cold and half the quantity of warm water at 112° Fahrenheit are required, and the douche has a fall of about one metre and a half. The irrigation begins with the warm current, and before the cold water is turned on pressure is made on the perineum with the vaginal tube, so as to allow all the warm water to run away from the vagina. The same plan is observed before the change from cold to warm, by which means the alteration in the temperature as felt by the patient is always sudden. Each time about two litres of cold and half the quantity of warm water are used. The douche is generally repeated about every hour and a half until labor is active enough to make its continuance probable. Of eighteen women treated by this method exclusively, and four others who were partly so treated, one died of eclampsia twelve hours after delivery, but all the others made a good recovery. The eighteen women who were treated by the douche exclusively had twenty children, of whom fifteen, that is, seventy-five per cent., were alive. These cases required on the average ten douches

and a half; in half the number three douches and a half were sufficient.—*Centralblatt fur Gynakologie—Medical Record.*

PÆDIATRICS.

TREATMENT OF WHOOPING-COUGH BY ATOMIZATION.

Dr. H. Ernest Schmid, of White Plains, N. Y., in the *Medical Record* of June 13, gives his experience as follows:

I rely entirely, no matter what stage of the disease, on spraying my patients with a solution of carbolic acid, menthol, cocaine, glycerine, and cherry-laurel water, generally in some such proportion:

℞

Acid carbolic	grs. vj.
Menthol, 4 per cent. solution	ʒ iv.
Cocaine, 3 per cent. solution	ʒ iij.
Glycerine	ʒ j.
Aquæ laurocerasi, ad	℥ ij.

This I direct to be used by the atomizer every three hours—but I mean a thorough use, a brutal one, if necessary. I have the child held forcibly by one or more persons, and disregard any apparent strangling of the little one during a vigorous atomization. The nozzle of the instrument must be directed as far into the mouth of the patient as possible. During the struggling and sputtering and strangling some deep respirations will ere long be made, and the object is accomplished. At first, of course, in most cases, violent paroxysms of coughing may result from the spraying, especially if much force has to be used with the child, but these soon cease and palpable effects are speedily noticed by the parents. The great point is to be able to impress them with the importance of perseverance.

I have seen the whoop arrested by this means after one thorough spraying, coughing without the whoop still going on for a while, and I have been gratified with inducing perfect recovery in one and in two weeks. A few cases in illustration might not be out of place.

A young lady, while on a visit in New York, was attacked by the cough. An excellent physician attended her, but the violence of her attack was terrible, and only excessive doses of anodynes gave her any rest at all. After two weeks she concluded to return home and arrived here perfectly stupefied, with her eyes starting out of their sockets from the dreadful straining accompanying the whoop. I stopped internal medication at once, put her on my spray, and in one week she was well.

I was called to see two children, one three years, the other not quite a year old, brought home by their mother from a visit to some distant place, and sick with whooping-cough. Both whooped badly. After the first spraying the baby ceased whooping altogether, and both were entirely well in two weeks.

A gentleman sent for me to consult me about his two-year-old boy who had the whooping-cough. The family had come from Europe a short time before on a visit merely, and were booked for their return to France two weeks later on. Mother and child had gone to North Carolina, to some relatives, and there the latter was taken with the cough. I expressed the belief that the little one might be cured in time for the sailing of the steamer if it were here. The father at once telegraphed the family to come. It was very hot weather. The little one almost perished on the trip, and I feared he would not live through the first night following his arrival, for bronchitis complicated the pertussis, and a highly febrile condition prevailed. However, he rallied very much by morning, and the spraying was then begun. The struggles of the determined little fellow were very great, but the treatment was carried out mercilessly. In consequence of this I ceased my attendance in eight days, and the family sailed for Europe on the day previously appointed, with a perfectly recovered child.

A short time ago I found in one of my families three children sick with pertussis. The two older ones, after considerable persuasion and coaxing, permitted the use of the spray, but the youngest refused it. The two elder ones recovered in two weeks, while the youngest is going through the slow, protracted course of internal treatment, the mother not being willing to use force.

From my repeatedly successful employment of this treatment, I feel justified in claiming that it promises to be one of the most efficient methods yet devised, provided it be used intelligently, thoroughly, and, if necessary, energetically.

HYGIENE.

RECEIPTS FOR SPECIAL FORMS OF DIET.

Boiled Flour or Flour Boil.—Take one quart of good flour; tie it up in a pudding-bag so tightly as to get a firm, solid mass; put it into a pot of boiling water early in the morning, and let it boil until bed-time. Then

take it out and let it dry. In the morning peel off from the surface and throw away the thin rind of dough, and with a nutmeg grater grate down the hard dry mass into a powder. Of this, from one to three teaspoonfuls may be used, by first rubbing it into a paste with a little milk, then adding to it about a pint of milk, and, finally, by bringing the whole to just the boiling point. It must be given through a nursing-bottle.

An excellent food for children who are costive in their bowels may be made by using bran-meal or unbolted flour instead of the white flour, preparing it as above directed.

Rice Water.—Wash four tablespoonfuls of rice; put it into two quarts of water, which boil down to one, and then add sugar and a little nutmeg. This makes a pleasant drink.

A half-pint or a pint of milk added to this just before taking it from the fire, and allowed to come to a boil, gives a nourishing food suitable for cases of diarrhœa.

Sago, tapioca, barley, and cracked-corn can be prepared in the same manner.

Beef Tea.—Take one pound of juicy, lean beef—say a piece off the shoulder or the round—and mince it up with a sharp knife on a board or a mincing-block. Then put it with its juice into an *earthen* vessel containing a pint of tepid water, and let it stand for two hours. Strain off the liquid through a clean cloth, squeezing well the meat, and add a little salt. Place the whole of the juice thus obtained over the fire, but remove it as soon as it has become browned. Never let it boil; otherwise most of the nutritious matter of the beef will be thrown down as a sediment. Prepared in this way the whole nourishment of the beef is retained in the tea, making a pleasant and palatable food. A little pepper or allspice may be added if preferred.

Mutton Tea.—May be prepared in the same way. It makes an agreeable change when the patient becomes tired of beef tea.

Raw Beef for Children.—Take half a pound of juicy beef, free from any fat; mince it up very finely; then rub it up in a smooth pulp either in a mortar or with an ordinary potato-masher. Spread a little out upon a plate and sprinkle over it some salt, or some sugar if the child prefers. Give it with a teaspoon or upon a buttered slice of stale bread. It makes an excellent food for children with dysentery.— *Annals of Hygiene.*

THE INFLUENCE OF DIET ON THE GROWTH OF HAIR.

Several cases of shedding of hair after influenza has confirmed the opinion of Dr. E. C. Mapother that diet has much to do with the production and with the cure of symptomatic alopecia. Hair contains 5 per cent. of sulphur, and its ash 20 per cent. of silicon and 10 per cent of iron and maganese. Solutions of beef, or rather, part of it, starchy mixtures, and even milk which constitute the diet of patients with influenza and other fevers, cannot supply these elements, and atrophy at the root and falling of hair results. The color and strength of hair in young mammals is not attained so long as milk is their sole food. As to drugs, iron has prompt influence. The foods which most abundantly contain the above-named elements are the various albuminoids and the oat, the ash of that grain yielding 22 per cent of silicon. With care these foods are admissible in the course of febrile diseases, when albumen is the constituent suffering most by the increased metabolism. Dr. Mapother has often found a dietary largely composed of oatmeal and brown bread greatly promote the growth of hair, especially when the baldness was preceded by constipation and sluggish capillary circulation.

Those races of men who consume most meat are the most hirsute. Again, it is well-known in the Zoological Gardens that carnivorous mammals, birds and serpents, keep their hair, feathers, or cuticle in bad condition unless fed with whole animals and the egesta contain the cuticular appendages of their prey in a digested or partly digested state. It is also an old well proven fact that a closely restricted diet, cheese for instance, soon produces in dogs a loss of hair.

In treating fevers a long course of non-nitrogenous diet may promote seborrhœa, which is so often a concomitant of the alopecia. When the special nutritive supply is secure, the depressed condition of the vasomotor and trophic nerves proceeding from the cervical ganglia to the scalp may be stimulated by blisters and liniments at the back of the neck. Dr. Mapother has always found that friction of the scalp with pomades and lotions dislodges many hairs which might otherwise remain, and that cold or tepid baths with salt added and rough rubbing of the rest of the body will flush the capillaries of the affected part more effectually. Besides, when pomades are used, frequent washing becomes necessary, and this is conducive to baldness.—*Brit. Med. Journ.*

MEDICAL CHEMISTRY.

TIMBOINE, A NEW AND INTENSELY POISONOUS ALKALOID.

Dr. Plaff reports from Brazil (*Pharmaceutische Post*) that he has succeeded in isolating from the crushed roots of a leguminous plant called *timbo* by the aborigines of Brazil, a new and exceedingly toxic alkaloid, to which he has given the name timboine. The Indians have long used a decoction of the timbo roots for the purpose of killing fish by poisoning the waters, just as *cocculus indicus* is used in other countries. A small amount of the decoction is said to suffice for a very large volume of water.

TONQUINOL.

Tonquinol, the new artificial musk, occurs as a snow-white crystalline powder with which needle-shaped crystals are interspersed. The odor appears to be due to the presence of a nitro-terpene and nitro-sulpho-xylol. It is soluble in alcohol, water, fats, oils, ether, and chloroform. The alcoholic solution (1 in 50), on considerable dilution with water, is very agreeable in odor, and the perfume is not precipitated. At present tonquinol is sold by the manufacturers at the rate of 1½ pence per grain.

NEWS AND MISCELLANY.

A PARISIAN DINNER.

ANOTHER PLACE THAT NEEDS A PURE FOOD "HEALTHERY."

According to *Le Cosmos* the following is the agreeable *menu* of a Parisian dinner:

As aperitive, a vermouth, which is rendered agreeable by the addition of sulphuric acid.

The diner then attacks his potage of tapioca—made of potato starch to which copper has been added.

His butter is made of calf's fat colored with lead.

His roast, of inferior quality, has been improved with saltpetre; he discovers a few truffles made of pressed clay.

The vinegar of the salad is seasoned with vitriol.

The peas—a little too green—taste of the copper which has given them their color.

Dessert: A chocolate cream; the chocolate is made of glucose, red oxide of mercury and red ochre.

For coffee he is given a mixture made of horse-liver roasted in the oven, black walnut sawdust, and caramel.

His small glass of kirschwasser, which terminates the dinner, contains as high as twenty two centigrammes of prussic acid to the litre.

After such a meal the Parisian has a terrible thirst; he wishes to drink beer, and he drinks it. It is a decoction of poppy-heads, elder, belladonna, datura stramonium, soda, tan-bark and picric acid!

MOTOR NERVES OF THE BLADDER.

Nawrocki (*Pfluger's Archiv*, xlviii, p. 335) has investigated the course of the motor nerves of the bladder of the cat. The animal was slightly curarised, and the effect on the bladder observed when the lower spinal nerves were stimulated. The bladder in this animal receives its motor nerves through two channels: (1) some motor fibres leave the spinal cord in the anterior roots of the fourth and fifth lumbar nerves, pass through the rami communicants into the lumbar part of the sympathetic chain, and then into the superior middle and inferior mesenteric nerves to the inferior mesenteric ganglion, and thence by the hypogastric nerves and hypogastric plexus into the vesical plexus; (2) other fibres pass along the second and third anterior sacral roots into the sacral nerves, and thence to the hypogastric plexus and vesical plexus.—*Brit. Med. Journ.*

A SPANISH FASTING WOMAN.

Dr. Vergara, of Villacienzo, in the province of Burgos, states that there is in that village a married woman, aged 48, who for the last seventeen years has taken no nourishment of any kind; in fact, we are asked to believe that nothing whatever has passed her lips except a small amount of water, which she takes every three or four days. During all that time she has not left her bed for a single moment; she lies there in a state of lethargy, which might be mistaken for death but for occasional slight movements of her body and a feeble moan which she utters when disturbed, as by light falling on her face. There seems to be no question of making the case a paying exhibition, as the husband resolutely shuts his door against mere sightseers.

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Clinical Lecture.

CORTICAL MYELITIS.

BY WILLIAM PEPPER, M. D.,

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Gentlemen: The history of the patient now before you is as follows, he is 21 years of age, a brakeman by occupation. Jan. 3d while on a coal train going down grade at twenty miles an hour, he jumped from a height of about four feet, striking on his feet with great force on a rail-road tie, but was not thrown down. At the time he did not seem to have received any injury and kept at his regular work until January 24th. In the evening of January 24th he began to have pain in the stomach and bowels and this was followed by an attack of diarrhœa lasting four days. Although this made him weak, he still kept at his work. The evening of January 29 he had an attack of headache and vomiting. The headache lasted for thirty-six hours. In the evening of Jan. 30th, that is four weeks ago he noticed weakness in both legs. The next morning the arms were also weak. The head was drawn back somewhat. The feet, hands and face were swollen and the feet pitted on pressure. At this time (Feb. 28th) the diarrhœa had stopped and he had been constipated for several days. He states that micturition was neither frequent nor difficult. The swollen condition of the face, hands and feet continued about one week and then passed away, but the loss of power in the arms and legs has continued until the present time. His voice also is somewhat hesitating but he says that this has always been the case. I was recently in Princeton in consultation with Dr. McDonald in regard to another case. He told me about this young man and we discussed the nature of the case. He afterwards wrote to me stating that the paralysis was increasing, I then advised that the patient be sent here as he could not be properly treated at his home. He arrived three days ago and I want to carefully examine him with you.

With the history that has been given us, it is difficult to avoid the notion that the violent shock which he received by jumping from the train had some effect in disposing to the symptoms that came afterward, yet it is curious that from January the 4th when the injury occurred to January 24, when the first marked symptoms appeared, the man should be able to continue at his work and as he states feel as well as usual. If there were a marked concussion of the spine produced at the time of the accident, there were no symptoms of it, we must at least admit that this established predisposition to the spinal trouble. From the fact that he worked three weeks after the accident it seems doubtful that there was actual disease started at that time. The fact that as soon as he was attacked with diarrhœa, weakness quickly developed in the arms and legs and has progressed until it has reached a high state of paralysis, shows that the spinal cord must have been in a morbid state at that time, and that being in this condition some subsequent exposure or some fatigue was sufficient to bring on the spinal disease from which he is suffering. If we say that the railroad injury was not the direct cause of the trouble, I should consider it contributory to it, in an important degree.

The present condition of the man is as follows: He can rotate the head from side to side but there is stiffness of the muscles at the back of the neck. At first there was retraction of the head with tenderness of the muscles. As you have heard there was at first weakness in the legs to which was added in a day or two weakness of the arms. There was headache and vomiting in the

beginning, but not much fever. He then had a curious condition which is described by him as a general œdema of the entire body. I did not see this and I do not know that his attending physician saw it, but the patient describes it as a general swelling of the face, arm and legs with pitting on pressure. There was evidently real œdema.

The retraction of the head is lessened but the muscles are not soft. He can rotate the head. By means of the shoulder muscles he is able to communicate a movement to the arms. He, however, is unable to flex or extend the fingers and can not move the arm. The right arm and the left leg are the most markedly affected. There is almost complete paralysis of both legs. In other words, the man is paralyzed from his shoulders down. There is no paralysis of the muscles of the face, and no affection of the special senses. The brain is not involved and the paralysis is evidently due to disease of the spinal cord not extending above the upper dorsal or lower cervical region. It seems to have been an ascending lesion. The legs first became affected and then the arms, but the arms were involved so soon after the legs that we may say that the cord was affected simultaneously in almost its entire length.

Now in regard to the lesion in this case. A hæmorrhage high up in the cord above the origin of the spinal acessory nerve would cause paralysis of the arms and legs. This would cause a sudden paralysis, but here the paralysis occurred gradually, first appearing in the legs. A rapidly spreading myelitis, that is, an acute inflammation of the substance of the cord might produce symptoms of this kind. What portion of the cord would need to be involved to produce the symptoms that we have here? In order to determine this we should have to study the sensation and the condition of the bladder and bowels as well as the state of the reflexes. We learn that he passes water naturally four or five times in the twenty-four hours, and that he has had no trouble with the bowels. There is, therefore, no paralysis of the bladder or rectum, and this has an important bearing on the case. Sensation has been tested and found good everywhere. He feels pin pricks and light touches, and can measure the distance between points close together. His power of localization is also perfect. The reflexes on the other hand are absent. Tickling the soles of the feet causes no response, and the patellar reflex is wanting.

Taking the history of the case with the symptoms present, it is clear that we have to deal with a primary spinal trouble; that this spinal trouble involves a considerable extent of the cord, that it is not a destructive lesion occurring high up. If it had been such a lesion, the symptoms would have developed suddenly and would have affected the arms at the same time as the legs, but the history indicates that the lesion began below and extended upwards. We have here a choice between two lesions, one is spinal meningitis extending along the cord producing exudation and causing pressure, and the other a lesion of a part of the antero-lateral column, a deep congestion or a myelitis extending up in the line of the afferent fibres that compose the antero-lateral columns. I have no doubt that at the beginning of the case there was some meningitis. The retraction of the head is extremely significant, but it appears quite clear to me that the case can not be regarded altogether as one of meningitis. In spinal meningitis, the paralysis does not become complete as rapidly as it did here. Usually, at most, it is partial, a paresis, not a complete paralysis. In the second place, in meningitis, there is, as a rule, much more pain complained of than here. Pain radiates through the affected nerves, and the flesh is more or less tender, and there is a tendency to spasmodic twitching of the limbs and the reflex irritability, instead of being lost is often increased, at least in the earlier stages. I think therefore, that these considerations are sufficient to make us fear that this has not been a simple case of meningitis although in all probability as is often the case in acute affections of the cord, the membrane is more or less involved. Nor can we believe that a simple congestion would keep up such grave symptoms. As I have told you on other occasions, spinal congestion which is not rare, sometimes causes almost complete paralysis which lasts for four or five days or a week and then passes away. It does not deepen as this has done until it becomes almost absolute paralysis of all four extremities. We are therefore compelled to assume that there has been a myelitis—an inflammation of the substance of the cord.

What I believe has happened here is that the shock this man received produced some sensitiveness or weakness of the spinal cord and then as the result of some exposure there was an intense congestion of the spinal cord and also of the gastro-intestinal tract as shown by the vomiting and purging which continued for four days. These symptoms

are not connected with the spinal affection, but simply indicate the violence of the exposure. Note also that even after the occurrence of this attack he kept at his work, that of a brakeman of a freight train, for four days during this time he was still further exposed and in his weakened state he was more easily affected by such exposure. It is probable that what began as a simple gastro-intestinal catarrh was succeeded by a myelitis because the man continued to expose himself to these morbid influences and this inflammation being predisposed to by the fact that the spinal cord was in a state of unusual weakness as a result of the accident three weeks previously. Whether or not there was at the same time some renal congestion and the œdema of the face and hands was connected with some temporary albuminuria, I cannot say. We would not regard this œdema as a direct symptom of the spinal trouble. The myelitis which was established was not a transverse myelitis, that is an inflammation that stretches across the cord involving white and gray matter; when a cross-section of the cord is involved we have paralysis of the bladder. The nerves which supply the bladder appear to arise from the deeper portion of the cord. We may have a cortical myelitis or a myelitis of one fasciculus and the bladder escape as here. The same is true in regard to the rectum. Again, in transverse myelitis the sensation is involved. It affects the gray matter of the posterior columns and the patient complains of numbness, a sense of tingling, a girdle sensation around the waist, and anæsthesia is found. Such marked distubances of sensation indicate that the posterior columns are affected and if associated with paralysis of motion, that the inflammation has been transverse and the entire thickness of the cord is involved. In this case there has been no affection of the sensation and we may safely say that the posterior columns are not affected and that the deeper portions of the cord also have escaped.

Lastly, there has been no marked rise in the temperature of this case, nor have there been marked trophic changes. It often happens in acute transverse myelitis that there occur trophic changes, as gangrenous bed-sores appearing with great rapidity upon the back or buttocks, too rapidly to be attributed to the effect of pressure. I have seen bed-sores in myelitis begin on the third day in a person absolutely healthy up to the moment of the attack, showing that there was a loss of the trophic influence of those nervous cells in the anterior columns of the gray matter which we know exert so powerful a control over the nutrition of the parts. This patient has shown no disposition to bed-sores. The absence of loss of sensation, the absence of paralysis of the bladder or rectum, and the absence of a tendency to bed-sores, make it clear that the myelitis has not been a transverse myelitis involving all the tissues of the cord. The lesion therefore has been either a cortical myelitis which is sometimes met with, or a fascicular myelitis ascending in a single column. Taking into consideration that there was in the beginning evidences of meningitis, and the slight irregularity in the disposition of the paralysis more marked in one member than in another I am disposed to regard this as a cortical myelitis with leptomeningitis of the cord, that is a meningitis of the pia and arachnoid with inflammation of the periphery of the cord. It is either that or an inflammation of the ascending fibres in the antero-lateral column, excluding, I think, the direct cerebellar fasciculus lying on the outside of the antero-lateral column nearest the posterior horn of gray matter. The other fibres of the cord cross, partly high up below the medulla and partly as they go down the cord. The decussation is not complete high up. Although the majority of the fibres decussate at this point, some of the fibres go down the cord and decussate at different levels. This fact would serve to explain the difference in the degrees of paralysis in the different members. The fact that the right arm and the left leg are the most affected would indicate that the inflammation is more marked on the right side. I think, therefore, that the diagnosis lies between cortical myelitis with slight meningitis or myelitis involving the antero-lateral columns and affecting the right side more than the left.

This is of course a serious condition. Myelitis rarely terminates in complete recovery. The main danger is due to the fact that lesions of the spinal column tend to be propogated in the line of the normal action of the fibres. If this were a lesion of the posterior column beginning high up it would descend. As it is a lesion involving ascending fibres, its tendency is to ascend. There is danger that in these cases the lesion will continue to ascend until it involves the base of the brain. We have noted here a peculiarity of the speech which almost suggest that the glosso-pharyngeal nerve has been reached. The patient, however, states that his voice has not changed.

What is to be done? The case is now more than four weeks old. The nutrition is

fairly kept up. He can take food well. We shall continue to keep up the nutrition with a carefully selected diet. We shall give a mixed diet excluding indigestible, rich or heavy, sweet articles. Attention will be paid to the bowels. If they are not opened twice a week, a laxative enema will be given. I am disposed to put him on the use of iodide of potassium with ergot and belladonna. The only hesitation that I have in adopting this treatment is because I know that his physician has used these remedies from an early period. He has been judiciously treated, and that is one of the worst elements in the prognosis. I shall, however, give him for a while five grains of iodide potassium with twenty drops of fluid extract of ergot and ten drops of tincture of belladonna three times a day. There are no remedies which exert a better influence over the blood vessels of the cord than do ergot and belladonna. I give the iodide in the hope that it will favor the absorption of any exudate that may be present. In addition we shall have massage with passive motion of all the joints practised in order to prevent wasting and contractures. The time has now arrived when we may safely use Faradic electricity over the lines of the nerves of the arms and legs. We shall also employ counter-irritation to the spine.

Two weeks later this patient was again presented showing some improvement. He had gained some power over the larger muscles of the left arm and could move the legs better. There was no improvement in the right arm. The treatment was continued and cupping along the spine twice a week added.

COMMUNICATIONS.

BOWEL TROUBLES OF CHILDREN.*

BY I. L. VAN ZANDT, M. D.,
FT. WORTH, TEX.

It is not intended that this paper shall be exhaustive of the subject treated. I purpose giving only some of the results of my observations during the twenty-five years of my practice.

I will premise by saying that either this class of cases has become very much milder or I have become much more proficient in its treatment, for while in former years death was not uncommon, I cannot now recall such a result in one of these cases in the last six or eight years.

Observation has led me to divide the ordinary bowel troubles of children into three classes, according to the character of the discharges. Experience has taught me that each of these classes requires and is amenable to its own special, I might almost say specific, treatment. My division of these discharges is as follows:

1st. Those composed largely of blood and mucus.

2d. Those composed of a green or greenish material frequently associated with shreds of coagulated milk. This class will embrace also those cases in which the matter is passed yellow and becomes green afterwards. Green actions are generally almost odorless.

3d. Those with very offensive smelling actions, of various colors, shades and consistences.

Do not understand me to say that all cases will typically come under one of these heads, but I do say that a very large proportion, perhaps 90 per cent., will show a close approximation to one or a blending of the characteristics of the two, not often of more than two of them.

As to the cause for the first, the dysenteric, I can say nothing. It seems to affect both children living entirely at the breast and those fed wholly or in part by hand; the latter class being the greater sufferers. I will say, without having kept a record, that, as with adults, May is the month of greatest prevalence in central Texas.

From "West on Diseases of Children," I learned a long time ago to rely mainly on castor oil and laudanum when we have to deal with mucus, blood and tenesmus, the laudanum varied according to frequency of action. These are my staple but not my only remedies. I give most cases a prescription something like this:

℞

Ol. Ricini	℥j.
Tr. Opii	gtt. x.
Ol. Anisi	gr. ij.
Pulv. Acacia	q. s
Syr. Simplicis	ad. ℥j.

M. Sig. Teaspoonful every three or more hours. This for a child one year old.

To this I may add Ol. Terebinth if there is a tendency to the formation of gas; pepsin or papoid if undigested food is passing; bismuth if the actions are particularly offensive to the smell; hyposulphite of soda when the associated fœcal matter is green. In some cases which were stubborn and disposed to

* Paper read before the North Texas Medical Ass. at McKinney, Tex., June 16th, 1891.

become chronic, I have had marked improvement follow the use of bichloride of mercury in 1–240 grain doses, repeated every three or four hours, with the oil and laudanum mixture or with an opiate alone.

For many years I had felt the need of a satisfactory prescription for the green diarrhœa of children, when about two years ago I had occasion to prescribe hyposulphite of soda for a child having green discharges, not, however, having in view the correction of this particular feature, but the correction came, though unlooked for. Acting on this hint I worked out the following prescription, which has had a very happy effect in a large percentage of cases:

℞ Sodii hyposulph .....gr. xx.
Ess. pepsin (Fairchild's).....ʒ ij.
Tr. opii..... .....gtt. oo to xxx.
Syr. aurant, q. s. ad.....ʒ j.
M. Sig. Half teaspoonful every three hours, preferably after eating.

The opiate is varied according to ferquency of the actions. If these do not occur more than two or three times in twenty-four hours, none is given, its use being intended only to retard peritalsis to such an extent that the digestive juices may have time to act on the food.

This character of trouble I think occurs most frequently among children at the breast; frequently among those having no artificial food, resulting, probably, from some ill condition of the mother, causing a deterioration of her milk. One case I now recall, having come on soon after the babe was nursed by the mother overheated and fatigued by a long walk. This mother tells me that such a thing occurred several times.

I come now to my third and most numerous class, perhaps outnumbering both of the others together. The subjects of this we find almost exclusively among children wholly or in part fed by hand. The large majority will be found between the ages of ten months and two years. The pathognomonic symptom of this is the exceedingly offensive odor of the discharges, which are generally of a dirty brown, varying in consistence from that of mush to a dirty water which runs through the napkin, leaving only a stain; in frequency from two or three to a dozen or more in twenty-four hours.

In 1873 I got from J. Lewis Smith's book on "Diseases of Children" a prescription which after some experiment I made to read as follows:

℞ Pulv. opii.....gr. j
Hydrarg. chlor mitis,.....gr. ij.
Cretæ prep.....ʒj.
Bismuth subnit.....ʒj.
Sacchari alb.....ʒij.
Ol. anisi.....gtt. iv.
M. div. in part .....xii.
Sig. One every three or more hours.

In this as in other prescriptions the amount of opium varies with the frequency of the actions.

This prescription has served me so well that I almost think there is no better. On account of its bulk and inconvenience of administration I have often tried to find a substitute, but have generally been forced to fall back to the old and tried servant, just as most of us have probably done when we have been induced by the oversanguine praise of some enthusiast, to try a substitute for quinine in malarial fevers.

In all of these classes, rise of temperature must be combated on general principles.

Special attention should be paid to diet, studying the peculiarities of each case and adapting thereto its proper diet, for all cases do not require the same. I will mention only one article of artificial food. It is not patented. It has served me well both in my practice and at home, my last baby having been raised on it. It is oatmeal water one part, sweet milk two parts. The water is made by boiling oat meal in a surplus of water, setting aside till the meal has settled to the bottom, and then decanting the supernatant liquid. This should not be mixed till just before using, as the mixture does not keep well. The "water" should be prepared once or twice a day as may be necessary to keep it fresh.

It will perhaps be observed that I have said nothing about cutting gums. I have been in the habit of saying that the best preventative for "teething diarrhoea" is to teach the mothers that teething has nothing to do with it, so that they may look elsewhere for a cause. Get them to understand that improper feeding is responsible for nine-tenths, filthy surroundings for nine-tenths of the balance, leaving one case in a hundred for undefined causes, among which may be teething.

I repeat I do not expect every case to present a typical exemplification of one of my classes, but that nine out of ten will do so or show a blending of the characteristics of two of them.

It may be said that I am a routinist. So might a physician of a non-malarial country, when making his rounds with his friend the "swamp doctor," on seeing the uniformity with which he gave quinine, accuse him of routinism. His ready response would be, these these cases are all the same and need the same treatment. So I say the cases of each class are of a like character and require like treatment.

SOME OF THE RECENT ADDITIONS TO OUR MATERIA MEDICA AND THEIR THERAPEUTICS. *

BY ROBERT R. LAWRENCE, M. D.,

HARTFORD, MICH.

The great number of, so-called, new remedies which have been introduced during the last decade and a-half, is truly marvelous, and the therapeutists of to-day must have a thorough knowledge of these recent additions to our materia medica, combined with the power to discern the conditions whereby their application to the treatment of disease will assure the prescriber more definite and favorable results, than those with which we are more familiar, and which have proven to be of inestimable value in many emergencies.

It is quite impossible in the time allotted to the reading of a paper before this section, to give even a passing notice to all the new remedies possessing merit, and a full consideration of any one of them, which I shall name, would form an exhaustive article. A goodly number of these remedies have been properly classified in accordance with their medicinal action, and have been assigned their respective places beside those which have borne the test of years, while others have so far been noticed only in the journals and trade circulars, pending more thorough investigation. To make use of a social phrase, the "bringing out" of a new remedy is attended with many misgivings, and subjects the author to severe criticism by his professional brethren, both far and near. The vegetable kingdom has been very generous in contributing its productions for the benefit of the science of medicine, especially is this true for the period above referred to. Undoubtedly you are all familiar with the botanical history and medicinal properties of the drugs which I shall name, hence I will not weary you with a reviewal.

We are frequently disappointed in the action of medicines and diligently watch for relief that never comes.

Individually, we are verv prone to look at their effects differently, or in other words, convince ourselves that our experience with a given preparation, is directly opposite to that of Dr. B., who has called our attention to it in such glowing terms.

Belonging to the list, and which have gained great favor with the majority of practitioners I will enumerate a few of the most prominent and favorably known, to wit: cascara sagrada, yerba reuma, yerba santa, jamaica dogwood, eucalyptus, strophanthus, quebracho, cocaine; and a score of others whose properties are as well defined as these. We were taught that the fl. ext. of rhamnus purshiana, was the remedy *par excellence* to overcome constipation, regardless of the primary cause. At first, given indiscriminately, failure was the rule, then it was claimed by the discoverer, that it had a tonic effect on the muscular coat of the intestinal tract, stimulating peristalsis; that the active principle was similar in its effects on the human economy to strychnia, and that in order to obtain definite results it should be administered in small doses, and continued for a length of time, *i. e.* until the habit was overcome.

To administer a single dose sufficiently large to act as a cathartic would not best serve the object in view, in fact it would not be preferable to many of our more palatable laxatives.

The rule with this amendment has possibly been followed to the letter, and just so long as the patient perseveres in its use so long is he or she relieved and no longer.

How many of my colleagues present ever cured, or relieved permanently, a case of habitual constipation and traced that cure solely to the administration of cascara sagrada.

The mere habit of giving nature an opportunity at regular intervals, in connection with a proper diet, is in my judgment of more value than the exhibition of this highly extolled remedy. The well defined action of this drug as a cathartic, precludes any comments derogatory to this medicinal property.

Tyro prescribes it with the same amount of assurance, as to the results, as he would opium to allay pain, which is very proper, as the prescriber must necessarily have confidence in his prescription if he expects to inspire his patient with this same property so essential in combating disease.

Do not assume that I am opposed or a foe to this very worthy drug. I prescribe it frequently in the manner before stated, but when considered as a *specific*—pardon the term—for that which it has been so highly lauded, I must needs take exceptions, as my experience has been diametrically the opposite, and the conclusion is arrived at without prejudice.

Yebra reuma possesses properties well worthy our attention. As an alterative to inflamed mucous membranes of long stand-

* Read by title before the Michigan State Medical Society, June 12, 1891.

ing, topically applied, I consider it without a peer.

In ozœna with that most fœtid of all orders, I have found it very useful, and in chronic inflammation of the Schneiderian membranes it is even more effective, and a few patients have claimed that they have received permanent benefit in chronic nasal catarrh, by the insufflation of this preparation, properly diluted. I do not wish to be placed on record as claiming curative properties for this drug in chronic nasal catarrh, as I attribute the exciting cause largely due to climatic influences, over which medication has no control.

Yerba santa in laryngeal troubles, strophanthus as a cardiac stimulant, and tonic, Jamaica dogwood, and sulfonal, as sporifics, these we will pass by, with many others, and consider antipyrin, the most popular derivative of the coal oil series, a remedy that gained a world-wide reputation in the treatment of that protracted and serious epidemic, la grippe.

The discoverer, Dr. Knorr, prepares it synthetically from the constituents of coal tar, and places it at our disposal as an infalliable antipyretic, although devoid of anti periodic properties. From large doses collapse may occur, and 50 grs. given at one dose is said to have caused death in 32 hours.

This potent remedy has unquestionably been productive of great harm, during the prevalence of Russian influenza.

The intense cephalalgia, which is so prominent a symptom in this disease, was relieved very soon after the administration of a full dose of antipyrin, and this promptness in alleviating pain has proven a great incentive for its use in many paroxysmal troubles. It has formed the base of a large number of the prescriptions which have been compounded for the treatment of this malady. Given in maximum doses, and continued for an indefinite period, must now be considered a misuse of the remedy.

A patient already prostrated by the ravages of this grave disease, with the heart's action weakened to such an extent as to favor local congestions is literally fed on this mere depressant, thus adding fuel to the flame; still not having a thorough knowledge of its physicological action, we adhered to the routine practice,and persevered in its use, which in many instances, I fear, actually retarded the patient's convalescence.

I have in mind a case, the history of which will illustrate the point I wish to impress upon you. Dr. R——æt 37 years, a practitioner, had been intemperate for years, though capable at most times of attending to business, was attacked with the grippe and to relieve the excruciating pain in the head, was forced to take large, and repeated doses of this preparation, and at the same time, abstained from his accustomed stimulus. When I saw him he was an object of pity, and in a most deplorable condition mentally, bordering on imbecility, although articulation was very indistinct, and his muttering delirium, alternating with sopor, or mild coma, from which the patient when aroused, would again revert to this uncontrollable delirium, formed a chain of symptoms not duplicated in most of the neuroses. Then is it not plausible to assume, that the indiscriminate, and injudicious use of this drug by its depressing effect on the heart's action, induced stasis, deposits &c? Particularly of the brain, which being burdened by alcoholism, and thereby developed this condition of the nerve centre referred to, and which in all probability will result in a structural change of the brain tissue, and a consequent cerebral softening. After giving king alcohol due credit for his part in this case, there remains sufficient evidence to warrant us in believing, that the excessive use of this preparation, should be interdicted, as the above case narrated would justify us in arriving at the conclusion that there is danger of forming the habit of taking antipyrin, as well as opium, chloral hydrate, cocaine, &c. with an equally disastrous and sad ending. This is but one of several instances differing only in intensity.

I will call your attention to but one other remedy and that is resorcin. It has not sustained its reputation as an antipyretic, was formerly used as an alterative through its caustic properties in chronic skin diseases.

Prescribed internally almost solely in those conditions of the stomach, and bowels attended with an excessive formation of gas, as the result of a fermentative process.

It is a favorite remedy with the venerable Dr. N. S. Davis of Chicago in the class of cases referred to. It undoubtedly possesses virtues of this character, as do many others.

In considering the relative values of the newer and older remedies, what have we to offer in favor of the former? When are we guardians of the public health, justifiable in making this attempt at empiricism, when their supposed therapeutical actions are identical? Should we refrain from prescribing the newer remedies until the list of older ones are exhausted? . Administer them to the moribund patients expecting thereby to

reach the pinnacle of fame in the estimation of our patrons and generate the feeling of enviousness with our professional brethren by thwarting death? Such a course would be very unjust to say the least, and the unfairness of which would be preceptible to all.

What is the object in making the change? Having prescribed a medicine with which we are very familiar, and which has not disappointed us in the majority of instances, notice the confidence with which it is administered to a patient in a critical condition; how eagerly we watch that life intrusted to our care, believing in, and expecting to observe some characteristic effect, whereby our patient is to be benefited. Are they more reliable or specific in their action? No, but a goodly number of these new additions have their medicinal action defined by their manufacturers with a mercenery object in view. Consider for a moment the extensive collection of printed advertising matter, that finds its way upon your office desk in a very limited time, issued by unscrupulous manufacturers, and equally unscrupulous dealers. This does not apply to all, but to the list considered as a whole. Too much credit can not be given to the worthy, as they form an essential part of our profession, and without them we could not succeed. Proprietors of these fraudulent pharmaceutical preparations, are not wholly to blame for the exaggerated, and supposed merits of this class of medicines.

Charlatans take an active part in this drama. To illustrate; Drs. R. and B. had, or claimed to have, a typical case of that human pest, typhoid fever. Patient was pronounced by them to be in a critical condition, and the case a hopeless one. Owing to the supernatural power possessed by the junior member, he was informed by some *innate prompter* that there was, obtainable in Chicago, a new remedy, a specific for this fever. He visited the city, hurriedly procured this wonderful compound, returned to his patient, barely in time to save life.

Patient's convalescence dated from the giving of the first dose, and thus a life *was saved.* This proves the assertion, that many new preparations, standard, semi-secret and proprietary, afford a new device for the mountebank, or pretender, to control his patrons by claiming to have knowledge not attainable in the regular way.

We may ask the question; if the application of remedial measures to the treatment of disease is an exact science, why are we so frequently disappointed in the results obtained?

Why is it that Dr. B. has such unparalleled success in the treatment of laryngeal troubles, through the exhibition of yerba santa or Dr. J. with cascara sagrada affords his patient permanent relief from constipation.

To be more expressive, must we take it for granted, contrary to our experience, that such wonderful cures are performed by a few physicians, while the great majority of equally well qualified practitioners proclaim that their trials have proven the reverse, when given in similar doses and under identical circumstances. We are all more or less inclined to be routinists, to have favorite formulæ, and strive to have our cases conform to them, in lieu of vice versa.

In most instances the selection of a remedy, or the formation of a prescription, is not so difficult as the true naming of the disease. And he, who is the ablest diagnostician, is, *the most successful practitioner* irrespective of individual "hobbies" the important question is not what are you giving, but what are you giving it for?

To summarize.

The number of unreliable remedies is far too great. That it is impossible for the active practitioner, to devote sufficient time to their investigation as to render himself, or herself a competent judge as to their merits. That in consequence we are forced to accept the word of unfair dealers.

That unless they possess some properties not found in the older there is no reason for substituting the new, for the old.

That when the pathological condition is clearly defined, there is enough to give. We are all in favor of progressive medicine but, *not in favor of progressive quackery.*

To conclude, remedies like men, must stand, or fall upon their merits, and upon this basis, the motive for this paper is founded, and presented to you for your consideration.

THE TYPES AND TREATMENT OF INTERMITTENT FEVER.*

BY ROBERT C. KENNER, A. M., M. D.

Within the last thirteen years I have treated more than three thousand cases of all forms of intermittent fever. These were seen in the most malarious portions of Kentucky and Arkansas.

*Read before the Hardin County Medical Society, September 3, 1891.

I have taken careful notes of these cases and have arrived at the conclusion that there exist several types of this disease which I shall briefly describe.

It is not my intention to give an extended review of the therapeutics of intermittent fever. This would be most interesting and would acquaint one who had not read medical literature with many curious facts and practices. But the limit of this paper forbids this altogether, and I shall therefore confine myself to those remedies which I have found of the most substantial value.

In this paper I shall only consider the means of intercepting future paroxysms, leaving the treatment of the issues of the paroxysms, itself untouched.

While the paroxysms may be essentially alike and have their origin immediately or remotely in the same cause, the practitioner is confronted daily in practice with *several distinct types of this fever.*

In other words, we constantly meet cases in which, while they are alike as to form, there are symptoms and conditions of the system accompanying the one that are wanting in the other, and measures that will speedily cure in one case will utterly fail in another. It is one of the primary objects of this article to define as clearly as possible symptoms and conditions which constitute and differentiate these types. My experience leads me to look upon intermittents of the quotidian, quartan, or any variety, as assuming according to the state of the system four different types, and the treatment to be largely successful in warding off future paroxysms must be adjusted on the basis of this differentiation of the types. Intermittent fever is no more necessarily the same in two or three cases in practice than so many cases of pneumonia or typhoid or scarlet fever.

The types of intermittent fever met with in practice may be classed in this order: (1) That which is attended with that condition known as "biliousness" in its most marked form. Plus the fact that the patient has had an intermittent paroxysm, "the complexion is muddy, the conjunctivæ are yellow, the tongue is heavily coated with a yellowish-white fur, a bitter taste persists in the mouth, the breath is heavy in odor, even fetid."* There is generally a disgust with food and more or less obstinate constipation. If the bowels have acted, they have generally done so imperfectly, and the dejections are clayey or yellow in color. There is frequently retching and vomiting. Vomiting is very often an annoying symptom. This type I have observed occurs *only* in those patients who have resided in *very* malarial districts, those who live close to stagnant streams or pools, or near the banks of a river which is low or overflows and inundates the adjacent lands. It seems that malaria formed in a locality of this kind is necessary to the production of this type. This type of intermittent fever formed ten per cent. of the cases of which I have notes. (2) The second type is that one in which the accompanying symptoms of "biliousness" may be present, but to a much less extent, or even, as they often are, entirely absent. The tongue is usually more or less coated, though it is many times perfectly clean. The bowels are generally constipated, but frequently it is only to a slight extent, and sometimes there is diarrhœa with a red "beefy" tongue. The muddy complexion and other symptoms of the preceding type may be present in a less marked manner. The patient generally gives a history of malarial exposure, though he is often unable to make it out, and as a rule he has not been subjected to as virulent a degree of poison as the class who present cases of the first named type. The febrile action in the hot stage will run as high, and the other stages will present no distinctive differences from ordinary intermittent fever, only that the first-named type may be attended with more gastric irritability and other symptoms of "biliousness." This type is the one ordinarily met with in practice. (3) The third type is where the paroxysms have persisted long and the patient has malarial cachexia. The patients are those who have been exposed to the action of the malarial poison for a long period, and who have had paroxysms regularly, in some cases for six months and a year. The patients are anæmic and usually have enlargement of the spleen and liver, with more or less dropsy. There is often bronchitis and diarrhœa, and this type has been mistaken for phthisis. The paroxysms are often masked, the cold stage is frequently but feebly expressed, and sometimes omitted entirely. The patient suffers from neuralgia and gradually becomes weaker until he succumbs, unless the treatment is successful.

The fourth type is the one in which the paroxysms seem to recur from *habit.* Its history is one usually marked by more or less continued exposure to the poison and neglect to employ remedies in proper time and manner. The patients are generally more or less anæmic, but present nothing

*The words in quotation marks are from Bartholow in Pepper's System.

like the depraved physical condition of those having malarial cachexia. It is seen mostly in those persons who have undertaken to treat themselves, or have resorted to the various nostrums until the system has become impoverished to a degree, and when the physician orders quinine taken in the interval he finds it unavailing. Even after removal to a healthy neighborhood the chills will recur.

While in this connection, it will not be out of place to speak of the importance of satisfying one's self that the patient has intermittent fever. Chronic pleuritis, hepatic abscess, abscesses, hysteria, hectic fever, and other diseases simulate intermittent fever very closely. Professor Andrew H. Smith, of New York, recently reported a case of malignant endocarditis which simulated intermittent fever very closely.‡ Graves, in his Clinical Medicine, lays particular stress on the importance of diagnosticating intermittent fever, and details a case of hectic fever which had been denominated intermittent fever by several able practitioners of that day.

In the *treatment of the first type* of cases, nothing is so important as the timely administration of the compound extract of colocynth alone or in combination with calomel. Without regard to the time of the next recurrence of the paroxysm, I usually give it in doses of from ten to fifteen grains, repeated every eight hours, till the tongue has cleaned off and the symptoms of biliousness have entirely disappeared. Should the paroxysms recur after this has been effected, quinine will have to be resorted to. But it is not, according to my experience, good practice to give quinine at the beginning of this type of cases. I have never seen a case that was clearly defined of this type that would not readily yield to this treatment. When gastric irritability complicates this type, the mild chloride of mercury should always be combined with the colocynth, otherwise it is not always necessary.

In the second type of cases we are called to treat the ordinary expression of the malarial poison. This is the form in which quinine acts as a specific as much as any drug acts under the circumstances. Given properly it is almost an antidote. I have found it best to give the antiperiodic in five doses, of four grains each, beginning six hours before the paroxysm is expected and given hourly until all five doses are taken. The last dose of the quinine will, of course, be taken an hour before the time that would be occupied by a chill. I have no reason for believing that the antiperiodic virtues of quinine are increased by giving it in one large dose, as Hertz and others advise. I order the antiperiodic taken as stated above, for three consecutive days. It is given with advantage in this manner, over the practice of giving what we consider the antiperiodic quantity at any time in the interval. One reason is that during the time quinine is being taken we keep the patient in doors till the time of the chill has passed, while if it is taken in the sweating stage, the patient might go out, unduly expose himself, and bring on the paroxysm. Then, given in this manner, we are more assured that the malarial poison is neutralized; besides, the production of cinchonism for three consecutive times will make the chances for the return of the chill almost inconsiderable. The experience of several great observers would seem to confirm this position. Professor Flint declared the chances that cinchonism produce in the interval would ward off a recurring attack was about equal with failure. It would seem that Professor Loomis favors this plan of producing several cinchonisms. He says, "Having prevented the recurrence of a second paroxysm, it is important that a moderate degree of cinchonism should be maintained for a number of days by the daily administration of quinine, in moderate doses, about two hours before the time of day at which the first paroxysm occurred; ten to fifteen grains should be daily administered." ‖ I have found the antiperiodic given in the sweating stage often produced vomiting. But granting that it will not produce even nausea, the fact that the patient might go out and bring on another paroxysm is sufficient, together with the fact that no advantage would be gained, to condemn the practice. Since I have begun to give the antiperiodic later in the interval my success has been greater. My experience has led me to the conclusion that quinine given in solution is not more certainly antiperiodic. Fluids, it is well known, are more easy of absorption than powders, yet we are not on this score to ignore making our prescriptions palatable. The exhibition of quinine in capsules is a practice open to no objection if they are soluble. I have never had cause to regret using the drug in this manner. To give it in freshly made pills is also a good way. When the stomach is irritable I order two grains of oxalate of

‡See *Medical Record*, July 30, 1887.

‖Loomis' Practice of Medicine, p. 116.

cerium with each dose of quinine. When the agent is to be given to children, I have ceased prescribing it any other way than in the aromatic syrup of yerba santa when it can be taken by the mouth at all. It completely disguises the taste of the drug and makes it so palatable that children like it. When it is not advisable on any account to give it *per os* or *per enema* it can be given hypodermically with advantage. Given in doses of six grains hypodermically, I have found it equal to twenty taken *per os*. When there is furred tongue and other symptoms of biliousness, colocynth and calomel should be added to the treatment.

Sternberg ascribes the oxytoxic powers often attributed to quinine to a misconception. I have often given women advanced in pregnancy full doses of quinine, and have never had the least reason to regard it as an abortifacient. Malarial fevers often produce an abortion, and this is how the drug came to be looked upon as an exciter of uterine contractions. *Cornus florida* (dog wood), given as before outlined may be used. So also may the kindred alkaloids of cinchona and the remedies mentioned above. Fifteen or twenty grains of the bromide of potassium or sodium given during the time quinine is being taken will entirely relieve the unpleasant effects of cinchonism, such as tinnitus aurium, etc. This also lessons the tendency to nausea and vomiting. Such good results follow it that I almost follow giving it in a routine way, and never fail to give it when the patient complains of the unpleasant effects of cinchonism.

In the third type removal from the malarial surroundings is imperative. The patient's general health must be looked after. Codliver oil, arsenic and iron are the remedies which will afford the best results. Diarrhœa, bronchitis, and whatever complications may exist will demand special interference suitable to the particular case and not possible to outline here. Arsenic should be given until the symptoms of arsenical poison in the edema arsenicalis appear. Quinine should be directed against the chills or elevations of temperature for one month, if that long be necessary to dissipate them.

The fourth type, which is seemingly *habit*, calls for treatment somewhat different than the other varieties. There are several remedies which render us substantial good in these cases, and which may be relied on with confidence. The patients should be put on tonics, such as iron. I frequently prescribe tr. ferrichlor. in combination with liq. arsen. chlor. with the most satisfactory results. The best means to arrest the paroxysms are those agents which impress the nervous system. The bath of cold water is an excellent measure, used as above directed. Opium in full doses, one hour before the expected paroxysm, is one of the surest means of curing this form. It is well often to combine capsicum or piperine with the opium. Opium should be given for at least three consecutive days, or may be longer.

When the chills recur every fourteen or twenty-one days, quinine in doses of five grains, given for a period of four weeks, generally succeeds, in my hands, in curing them.

AN OPHTHALMOSCOPE FOR GENERAL USE. *

BY EDWARD JACKSON, M. D.,

PHILADELPHIA.

It would be a great gain to both doctors and patients if a much larger proportion of those who class themselves as general practitioners were able, when the need for it arose, to use the ophthalmoscope. One who has no practical experience with it cannot even properly appreciate what he reads or hears of ophthalmoscopic appearances. And there are in the aggregate many cases in which the progress of general disease could be far more intelligently followed by its routine use, without entering upon debatable ground or attempting to use symptoms of doubtful significance.

With the ophthalmoscope, as with other instruments, the cheap instrument is very apt to lack certain important features, and the costly instrument is mainly confined to the possession of those who mean to use it a good deal. It took many years to adapt the microscope to the needs of clinical work, to rid it of mechanical stages and other mechanical nuisances, and perfect its really essential parts. And the ophthalmoscope must pass through a similar pruning and adaptation before its use can be truly popular and common in the profession. For some years I have been working at this problem, and herewith present my results.

The ophthalmoscope for general use must: First, be one in which the difficulties of

* Read before the Philadelphia County Medical Society, Sept. 9, 1891.

using the instrument are as far as possible overcome. Second, it must be one that will be as satisfactory as any of the best instruments for any case that is likely to be encountered. Third, it must be cheap. For this one I have no hesitation in claiming that with it the fundus of the eye can be seen as readily as with any ophthalmoscope heretofore made; for all practical purposes as a refraction ophthalmoscope, its lens series is complete; it can be bought for eight dollars.

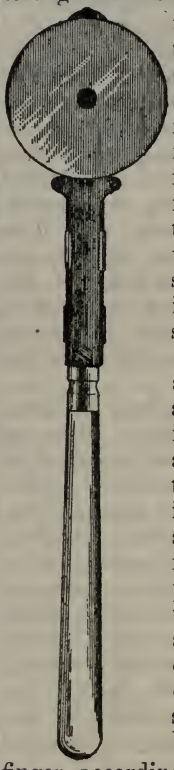
It is easy to see through, because the mirror, which is circular, 30 mm. in diameter, tilts each way to the best angle, at about 25 or 30 degrees; it has a shorter canal, and wider lenses than have most first-class refraction ophthalmoscopes; each lens is retained in exact position by a spring stop, and all the lenses or combination of lenses are available without taking the instrument from the eye.

The lens series is furnished by combinations of six lenses in two slides, and consists of convex 1, 2, 3, 4, 6, and 12 dioptres; concave 1, 2, 4, 6, 10, and 22 dioptres. To appreciate this series one must bear in mind the degrees of ametropia that are commonly encountered in practice. Among 4,000 eyes, the statistics of which I have published in the *Transactions of the American Ophthalmological Society* for 1889, only one eye had hyperopia of 13 dioptres, and only one eye had myopia of 23 dioptres.

The series does not contain half-dioptres, which are given in all the larger refraction ophthalmoscopes; but a very prominent ophthalmologist has recently said that he had the half-dioptre lenses taken out of his large instrument (Noyes' modification of Loring's) as comparatively worthless. Under especially favorable conditions there are a few ophthalmoscopists who have constant and extensive practice with the instrument who can I believe measure refraction with a little more exactness with half-dioptre lenses than they could with only whole-dioptre intervals. But the ophthalmoscopists that can do this are comparatively few, the cases in which they can do it are few, and the practical value of doing it is utterly insignificant. For those who are not in special practice half-dioptre intervals are always a delusion and snare, a hindrance, a cause of inaccuracy. They are, therefore, discarded.

Although the statistics above referred to show that in but one eye in 40 of those encountered in practice is the degree of ametropia over 6 dioptres, to one not very familiar with the properties of lenses the intervals between the stronger lenses of this series may seem too great. Such must be reminded that the effect of every intermediate lens strength may be obtained by slightly varying the distance of the lens and instrument from the patient's eye. Thus the convex 6-dioptre lens acts as such only when placed against the eye; by drawing it back less than three inches it is made to act as a 12-dioptre lens, and within that space will correct any intermediate amount of hyperopia. By withdrawing the 12-dioptre convex lens a little over one inch it takes the place of a 20-dioptre lens. On the other hand, by withdrawing the concave 22-dioptre lens a little over two inches its effect is diminished to 10-dioptres, and in that space every intermediate strength is reproduced. In the same way the withdrawal of the 10-dioptre concave lens to the same distance gives us the 6-dioptre effect.

When this is remembered it is readily seen that any measurement of refraction by strong lenses is utterly untrustworthy unless the distance of the lens from the eye is taken into account; and if it is taken into account, any additional intermediate lenses are quite unnecessary. The above series is sufficient for the direct method in all cases except the very highest myopia, for which the expert ophthalmoscopist is apt to resort to the indirect method as more satisfactory.



To one accustomed to using a disc ophthalmoscope the arrangement of lenses as here in slides will at first seem awkward and confusing, but to one who begins with this instrument, or who has already used an instrument in which the lenses are so placed, it is especially convenient. The convex lenses are all in the back slide, the concaves in the front. One can be used alone, or both slides can be moved at once by the tip of the same forefinger, according to the lens required.

In the focus of the mirror, the size of the sight hole, the blacking of it, the proportioning of the instrument, and its mechanical execution, it is to equal the best ophthalmoscopes now used. It is made by Mr. D. W. Brown, of Philadelphia.

Since this is not my first attempt at the modification of the ophthalmoscope, and another instrument has my name associated with it, perhaps it will prevent confusion if I exercise the right of naming this. And with the idea of giving it a name that shall by a single word indicate the idea of its design for general use, I shall call it the Polyclinic Ophthalmoscope.

Society Reports.

THE SECOND TRIENNIAL MEETING OF THE CONGRESS OF AMERICAN PHYSICIANS AND SURGEONS HELD IN WASHINGTON, SEPT. 22, 23, 24 AND 25, 1891.

GENERAL SESSION.

The Congress was called to order by the Chairman of the Executive Committee, Dr. William Pepper, who introduced the President, Dr. S. Weir Mitchell, of Philadelphia.

The first scientific matter brought forward was the disease or conditions underlying the

Infection of Wounds,

including a discussion of disinfection with reference to treatment of wounds, of the relation of bacteria to suppuration, of the resistance of tissues to the multiplication of bacteria and of the effect of antiseptic agents on wounds.

The discussion was opened by Dr. William H. Welch, of Baltimore, Md., who held that the presence of certain kind of bacteria as an essential condition of wound infection is so well established that discussion of this point is not likely to arise. The comparitively simple conception that a wound to which bacteria gains access, necessarily becomes infected, has been greatly modified. The traumatic infection present there own peculiar problems. The doctrine of wound infection involves the consideration of many varying and often complicated factors relating both to the agent of infection and to the individual exposed to the infection.

The subject was considered under the following heads:

1. What are the micro-organisms concerned in the infection of wounds, and how do they act?

2. How are we to explain the great differences in the effects produced by the pyogenic micrococci; their apparent harmlessness under some conditions, their fatal influence in others?

3. What are the ways by which bacteria gain access to the wound?

4. How often are bacteria to be found in wounds treated antiseptically or aseptically? What are the character of these bacteria, and where do they come from?

5. What are the best means of surgical disinfection?

The observations as to the relative frequency of the ordinary pyogenic staphylococci and streptococci are not altogether concordant. The yellow staphylococcus appears to be more common in furuncles and abscesses than the white staphylococcus.

The author had found a white staphylococcus in small stitch abscesses and minor grades of inflammatory disturbance in wounds treated antiseptically and aseptically, which differs in certain particulars from the staphylococcus pyogenes albus. He suggested that it be called the staphylococcus epidermidis albus. The efforts to differentiate into distinct species the pathogenic streptococci have met with little success. The list of bacilli which may be concerned in suppurative and other inflammatory affections is much larger than was formerly supposed. The bacillus coli communis was referred to. The chief interest of the observations being that they furnish an illustration of the possible predisposition to infection afforded by intestinal lesions, and also give an example of the much disputed auto-infection of the suppurative inflammations examined bacteriologically, with negative results may be mentioned abscesses in which the bacteria were presumably dead, several cases of pyosalpinx and suppurating buboes and some abscesses of the liver.

There is reason to suppose that the process of suppuration serves a useful purpose and is one of the most efficient weapons employed by nature in combating invading micro-organisms. Exactly how the abscess formation checks the invasion of bacteria we do not know.

The quantity of a culture of the staphylococcus aureus required to produce suppuration is not the same for all tissues and all parts of the body. There are also variations in virulence of different cultures of the pyogenic cocci. Inasmuch as it is by their toxic products that the pyogenic bacteria do injury, it is not surprising to find that it makes a great difference in the result, whether or not these bacteria enter the tissues already equipped with a reserve force of this poisonous material, or whether they

must begin the fight unarmed. This matter of accompanying toxines is possibly of great importance in our understanding of the potentialities of the living agents of wound infection. The differences in virulence found to exist between inflammatory exudates from various sources are much greater than those observed in the cultures of the same bacteria on artificial media.

In regard to the conditions in or about a wound which favor the lodgement and development of pyogenic bacteria, it may be said that anything which interferes with the integrity of the living tissues in a wound is a predisposing cause of suppuration. Chemical irritants, such as carbolic acid and corrosive sublimate, favor the development of micro-organisms. A solution of corrosive sublimate as weak as one to two thousand is followed by a distinct line of superficial necrosis. We are not so well informed as to the influence exerted by blood in a wound. Most surgeons lay great stress on hæmostasis in surgical operations, while others advise that in certain classes of cases the wound be permitted to fill with blood clot. Is this a source of danger? Fresh blood serum does not possess any such germicidal power over pyogenic cocci as it does over the typhoid and many other bacteria. The power of the living tissues to overcome a certain number of pyogenic bacteria is well recognized, and the tendency of modern surgeons is to respect these tissues more and more. Not to destroy their vital capacities by the unnecessary application of strong chemical disinfectants, not to bruise them, not to make them too intense, not to strangle them, not to suffer the presence in wounds of spaces and bodies which remove bacteria from the influence of the living fluids and tissues.

Of the various ways in which pathogenic bacteria gain access to wounds, that by contact with infected hands, instruments, and other objects, offers the greatest danger. The possibility of infection from the air can not be ignored. Even in wounds treated aseptically or antiseptically it is not uncommon to find bacteria. The skin may have all sorts of bacteria upon it, but in addition it has its own distinct bacteria. After the skin has been thoroughly washed and scrubbed the prevailing organism will be found to be the white staphylococcus. This is often found in parts of the epidermis deeper than can be reached by any known means of skin disinfection. We can now understand how without any flaw in the antiseptic technique of the surgeon, this micro-organism may be found present in wounds, and we have here an explanation of the frequent occurrence of stitch abscesses, although the inference should not be drawn that the white staphylococcus is the only bacterium concerned in the production of these annoying complications. How much practical importance attaches to the demonstration of this coccus, the author was not prepared to say. The surgeon with good technique, who does not bother himself about this coccus in the deeper layers of the skin, is not likely to be severely punished by the behavior of his wounds. Those who put in drainage tubes and other extraneous substances will have to consider it. Some surgeons on the basis of researches on the bacteria of the skin have abandoned skin sutures. The edges of the wound being brought together by subcutaneous sutures.

In regard to the methods of surgical antisepsis, it was said that the conditions for efficient chemical disinfections have been found to be far more complicated than was formerly supposed, and the substitution, wherever applicable, of the simple and certain methods of disinfection by heat is to be commended. Chemical disinfectants still have their place for many purposes in the operating room, but their place is not in healthy wounds. Thorough scrubbing of the skin with soap and water by a sterilized brush removes many of the bacteria but not all, and cannot be regarded as satisfactory means of cutaneous disinfection. Corrosive sublimate accomplishes much less than is generally supposed. The best results obtained have been by a method in which a saturated warm solution of permanganate of potassium followed by a similar solution of oxalic acid, plays the principle disinfectant role, and this is the procedure now adopted in the gynæcological and surgical wards of the Johns Hopkins Hospital.

CONDITIONS UNDERLYING THE INFECTION OF WOUNDS, INCLUDING A DISCUSSION OF DISINFECTION WITH REFERENCE TO TREATMENT OF WOUNDS, OF THE RELATION OF BACTERIA TO SUPPURATION, OF THE RESISTANCE OF TISSUES TO THE MULTIPLICATION OF BACTERIA, AND OF THE EFFECTS OF ANTISEPTIC AGENTS ON WOUNDS.

BY ROSWELL PARK, M. D. OF BUFFALO, N. Y

The study of wound infection is insepara-

ble from that of immunity, and when we have learned that which constitutes or favors immunity, we shall approach nearer to that which is now a terra incognito. Immunity is a complex condition not dependent upon any single factor and from pathological interest as well as from clinical importance, our endeavor now must be to analyze the main question of what constitutes or confers immunity, and try to recognize and then solve its various subordinate queries. This statement too is inseparable from another which is to the effect that the surgery of to-day should aim to be aseptic and not merely antiseptic. In other words, we should abolish sepsis and not merely aim to antidote it or conquer it when present. The condition of sepsis is a complicated one consisting of a poisoning by ptomaines, toxines and albumoses having widely different properties. Some of these substances are so antagonistic that one may neutralize the other. In the intestinal canal there are produced poisonous substances which are taken up by the absorbents but then are filtered out by the liver before reaching the systematic circulation. It is by virtue of this depurative action of the liver that many cases of septic intoxication in surgical patients are avoided. In a division of the general subject of blood poisoning, a condition which may be called intestinal toxæmia or intero-sepsis, deserves a distinct place. This occurs not infrequently and may merge into a condition of sapræmia or septicæmia, but if promptly checked there is a speedy return to a desirable condition both of wound and patient. By no means do all cases of surgical sepsis have their origin in or about the wound.

We have learned a little in reference to the antagonism of different bacteria and the poisons which they produce. A microbe may enter the system and produce a proteid or albuminose, poisonous to the animal while the introduction of some other substance may neutralize this poison and save the animal. The principle is the same whether the antidotal poison be injected as such or a second species be inoculated by which it may be produced. Brunton has suggested that blisters do good in this way, by an endermic administration of proteids derived from the blood, but so altered in their passage from the vessels as to have a different effect, and probably by their chematactic properties. He also suggests that bleeding may act in a similar manner as it has been shown that the abstraction of venous blood causes an absorption of proteid matters from the tissues and these may have an action of their own on the tissues with which they come in contact. The benefits of free purgation probably find here their proper explanation.

The term chemotaxis to which reference has been made, relates to that faculty possessed by all motile bacteria, of moving towards or away from certain substances which seem to attract or repel them. The same power is inherent in the plasmodia of myxomycetes as well as in various other unicellular organisms and leucocytes if not other cells of the human body possess the same property. Chemotaxis is spoken of as positive or negative as there appears to be attraction or repulsion. Among the most actively positive chemotactic substances are cultures of bacteria. These are powerfully attracted by the leucocytes. The effect is the same whether the cultures are alive or have been killed by boiling. The active agent is some product of the life and growth of the bacteria. The leucocytes thus attracted act as scavengers for the surrounding tissue.

These facts have an important bearing upon questions which vitally concern the surgeon. In the light of these researches, it is diffiult to see how the possibility of phagocytosis can be denied and the impossibility of this process looms up in a flood of light when one discusses the phenomena of suppuration or of other kinds of infection as well as of recovery or immunity therefrom. Support of the phagocyte theory has come from the work of Hankin on defensive proteids. From the spleens and livers of various animals he has isolated the proteid which has the power of killing bacteria and he has found that this, while absent from normal blood could be obtained from the blood of febrile animals.

The separation of dead and dying matter is a process in which the formation of proteid material figures largely. An important bearing of these facts is on the use of so-called antiseptic agents. The ideal antiseptic is probably blood serum, its parasiticide properties being in all probability connected with the existence in it of a globulin which is soluble only in a weak solution of common salt. This may explain the well known antiseptic action of common salt.

It has been stated that by no means all the sources of sepsis concern the wound itself. The other principal sources of infection may be classified as follows:

1. Previous long existent toxæmia as syphilis, diabetes, acetonæmia, lithæmia, alcoholism, malaria.

2. Previous anatomical changes which

reduce vitality, as inherited diatheses, old age, amyloid change, chronic and acute nephritis.

3. Recent or acute toxæmia, as uræmia, typhoid, intestinal toxæmia, stercoral toxæmia.

4. Other acute conditions as starvation, scurvy, anæmia.

5. Conditions of environment, as bad hygienic surroundings.

6. Effect of anæsthetics.

7. Effect of antiseptics.

Antiseptics may favor infection in more than one way, mercurial and iodoform poisoning are not uncommon. With this established the case becomes one of acute toxæmia. The wounds may fail to unite and suppuration may occur again, the chemical reaction between the vital fluid and the antiseptic, may cause a loss of the properties of the antiseptic agent while the tissues on which it acts may have their constitution so changed as to favor rather than resist infection. Investigations make it appear best to keep all antiseptic agents away from absolutely clean, fresh surfaces. The value of blood serum as an antiseptic has been abundantly shown. This will be poured out in quantity sufficient to serve not only as a cohesive but as an antiseptic agent. The question here arises as to what is the best antiseptic. It would appear that for most purposes peroxide of hydrogen is the ideal antiseptic as it not merely destroys living organisms but by oxidation of undesirable and infected material acts as a scavenger of the tissues. We however, have yet to learn how to utilize to the fullest advantage the properties of blood serum.

Direct infection may be of two varieties, self or auto-infection and contact infection. The principle sources of contact infection are as follows: 1. Skin and hair. 2. Instruments. 3. Sponges or their substitutes. 4. Suture materials. 5. The hands of the surgeon and his assistants. 6. Drainage materials. 7. Dressing material. 8. Miscellaneous drops of perspiration, an unclean irrigator nozzle, the nail brush, the clothing of the operator, or bystanders, etc.

The best plan of sterilizing the skin is shaving, followed for a day or two, if there is time, by some antiseptic ointment properly prepared. The skin should then be washed with sapo viride of the German pharmacopœia with five per cent. sol. of lysol or hydronaphthol. Then there should be worn until the time of operation a compress wet with some liquid, non-irritating, antiseptic such as creolin, lysol, (five per cent.) or hydronaphthol in saturated cold aqueous solution. At the time of operation there should be a final scrubbing with hydro-naphthol soap with shaving and then the skin washed with equal parts of alcohol and ether, or alcohol and turpentine. Where there is not time for this we must content ourselves with the thorough use of the nail brush, the razor and antiseptic soap with the subsequent use of alcohol and ether.

Instruments are best prepared by dry sterilization as this injures them less than other plans.

In regard to sponges there is nothing to be added to the well known directions. It would seem better to use some cheap absorbent material which after use could be thrown away.

Silk is best sterilized by placing it in a test tube, then plugging and keeping for an hour in a steam sterilizer upon two different occasions. Silk-worm gut may be prepared by immersion for a few hours, in a one per cent. aqueous solution of corrosive sublimate and then preserving in alcohol. Cat gut is best prepared by immersion in benzine or ether to remove fat. It is then dried and soaked for one or two days in a one per cent. watery solution of corrosive sublimate after which, it is dried and transferred to oil of juniper berries, and from this to strong alcohol containing one permille of sublimate. In this, if desired, it can be boiled. It may be chromicised before putting in the oil of juniper.

The hands even after having been in contact with septic matter, may be sterilized by the following method: Wash with soap and water, using nail brush. Then wash the hands and arms with flour of mustard as though it were powdered soap. This will remove all odor. Then wash with sapo viride [G. P.] to which has been added five per cent. of lysol, creolin or hydro-naphthol. Then rinse and immerse in a strongly colored solution of permanganate of potassium. They are then rinsed and immersed in a solution of oxalic acid, sufficiently strong to decolorize the skin in two or three minutes. The oxalic acid is rinsed off and the hands may be considered aseptic.

Drainage is probably required only in septic or infected cases.

After an ideal aseptic operation, we need only a sterilized and a protective dressing. In some cases there may be advantage in impregnating the dressing with some antiseptic.

Among miscellaneous sources of infection may be mentioned the use of an unguent

applied to the skin to prevent the adhesion of dressings. Experiments have shown that ointments made with even ten per cent. of resorcin or naphthalin without the application of heat contain bacteria. The same ointments heated to the temperature of boiling water seem to be sterile and to suffer only from air contamination.

Dr. Park presented the following conclusions:

1. Study of wound infection and of the septic condition thereby produced is inseparable from a study of what constitutes immunity.

2. By a study of immunity is furnished the best clue to a due appreciation of the principles of asepsis.

3. The surgery of the future must aim to be aseptic, for so far as fresh cases are concerned we have passed the merely antiseptic era.

4. Asepsis is to be achieved not alone by attention to the wound and the paraphernalia of operation, but by the closest regard to the condition of the patient's organs and tissues.

5. Sepsis may arise from circumstances and conditions other than those pertaining to the wound itself, although hitherto, practitioners have been too prone to scan solely this field when searching for its cause.

6. Sepsis and infection are combated in more than one way by natural agencies and by inherent properties of cells and fluids totally aside from the measures which the surgeon institutes, and the wisest man is he who studies to take advantage of these vital activities rather than introduce new and conflicting elements from without.

7. A recognition of the power of chemotaxis possessed by organized and unorganized materials in such varying degree, can be utilized to great advantage so soon as it can be reasonably and clearly defined.

8. A study of chemotactic activity appears to impress one with the truth of the phagocyte doctrine which if proven, is one having a large bearing upon the principles as well as the practice of the surgery of the future.

9. The proteid material contained within, and cellular infectious organisms, both play such a role in causing chemotaxis as well as in poisoning the animal infected, that we have reason to eagerly welcome all knowledge concerning it.

10. So fast as such proteid material can be isolated, we need among other things to study its effect upon the commonly used antiseptic agents.

11. We need to study much further the anti-toxic and bactericidal properties of human blood serum and the means by which we can avail ourselves of the same.

12. Some such classification as I have attempted to give of the various causes of lowered resistance to infection, or of the causes of vulnerability or susceptibility, will certainly assist in a due appreciation thereof, and will often aid in so fortifying the patient that he may resist infection to which he would otherwise succumb.

13. The condition of enterosepsis, fæcal toxæmia, stercoral intoxication, or whatever it may be called, is certainly one which every practitioner has to fear and against which he should assiduously guard. It is not sufficiently recognized and combated.

14. A sub-form of this condition might justly be made and entitled gastrosepsis, comprising cases where defective stomach digestion, often from dilatation, brings about a lithæmic or other toxæmic condition which favors infection.

15. Antiseptic agents in the past have worked a revolution in surgical practice and results. We have now reached a time when we know they all have their disadvantages, and also understand how, if we are strictly antiseptic in our work, we can afford to discontinue their application to wound surfaces.

16. But the insurance of aseptic character of such work, necessitates the use of antiseptic agents of some kind upon everything which may directly or indirectly come in contact with their surfaces.

17. When this work is strictly aseptically performed, the use of drains or further employment of antiseptics, is either an expression of mental uncertainty or of fear. It may be in the interest of humanity, undoubtedly it often is, but it is not attaining the ideal of scientific work.

Dr. Arthur I. Cabot, of Boston, referred to the debt which practical surgeons owed to the scientific workers. It is the knowledge of how to obtain aseptic wico wounds that has revolutionized surgery. Reference was next made to the phagocytic action of the cells and to the germicidal action of the blood serum. The only question is as to which of these processes is distinctly destructive. The bactericidal action of the blood serum has been proved. These observations may serve to explain some of the phenomena in wound fevers. It may be that in erysipelas, the irritation set up by the application of blisters, iodine, etc., may serve to limit the spread of the disease by the action of the blood serum on the micrococci of the disease.

In treatment of wounds its desirable to avoid placing animal sutures in the wound. It is better to close all spaces in the wound by pressure. He had found by culture experiments that where the skin prior to the operation was free from organisms, yet at the close of the operation their presence could be demonstrated showing that bacteria had been sown on the wound by the air or otherwise. If necrotic tissue or animal sutures be present, they might constitute a nidus for the development of the bacteria.

Mr. Thomas Bryant, of London, said that if bacteria are the seed, we must remember that the soil is not of less importance. If the soil is not suitable for the growth of the seed it will not grow. No surgeon would operate on a patient except in a case of urgency until the subject had been prepared for operation. In order to prevent the entrance of the germs, irrigation is of service. For this purpose iodine water made by adding a few drops of the tincture or solution of iodine water, is the most valuable. This may be made of a light cherry hue for clean wounds, and of a dark cherry for dirty wounds. It also acts as a good styptic. As a dressing he uses wood wool. The wound is dusted with iodol, one to five parts of boracic acid. In every operation there is a certain amount of molecular death, and drainage is required for thirty-six hours. Pressure is better than deep sutures for bringing the deeper parts of the wound in contact.

Dr. Harold C. Ernst, of Boston :—While it is true that nearly all forms of suppuration are attended by bacteria, yet it has been shown that a process answering to suppuration can be produced without the action of bacteria. The products of this suppuration however, do not produce activity when introduced into other animals. It has been shown that some of the agents used to destroy bacteria, really favor their growth by diminishing the chemotactic power of the surrounding tissue cells. Notwithstanding laboratory experiments show the possible occurrence of chemical suppuration, it shall remain to be demonstrated that the infection of wounds as seen in practice, occurs without the influence of bacterial activity. The most important lessons taught by investigations in this subject are those which warn us that our pupilage is not yet over, and that we are but entering upon the first stage of our knowledge of the processes spoken of here to-day.

Mr. John Chiene, of Edinburgh, said that he had assisted Professor Lister during the whole of his time in Edinburgh. The longer he lived the more he believed in the work of Lister and the impress he had made on surgery. He considered the bacteriological investigations as of the greatest importance, for on these the surgeon must depend in his daily work. Lister long ago spoke of the antiseptic value of the blood clot. But long before John Hunter pointed out the value of the blood clot, the speaker considered that the spray was of great service. The term "integrity of the tissues" had been used by both speakers, but John Hunter had also laid stress on the "vitality of the tissues" which he defined as "the power of the tissues to resist putrefaction." He thought that not only by improving the soil but by destroying the plant, the best results would be attained.

Dr. Arpad G. Gerster, New York, spoke of the many sources of contact infection and referred especially to infection, the result of bad habits on the part of the surgeon. The surgeon may carry out all details of aseptic and antiseptic treatment and yet nullify all by a habit he may have of rubbing his nose, his hair, or his face, or as the speaker had seen, placing the knife in his mouth that he might use his hand. An important point in the prevention of infection is clean dissection with the knife without tearing or bruising the tissues. In regard to irrigation and drainage he said that this could be eliminated only where the surgeon was absolutely certain of his asepsis and thought it dangerous for the general practitioner to discard drainage. If he is not certain of his asepsis he should cling to the older methods, and from these he may ascend to the highest pitch of skill when he can work with real asepsis.

Adjournment of Tuesday afternoon.

TO BE CONTINUED.

Special Correspondence.

PARIS LETTER.

The recent discussion at the Academy of Medicine, of the causes of the feeble population of France, reminds us that the Malthusianism of to-day (nio-Malthusianisme) is a question to be carefully considered, as it strikes at the very life of nations. In the beginning of this century Mr. Malthus, a famous political economist, predicted eventual starvation for the human race unless

artificial checks to population were introduced. *Now* our scientists fear *de*population unless these checks are removed or regulated. As investigation proves that the feeble population of France is not due to the mortality of the new-born, but to a diminution of the desire on the part of women to assume the responsibilities of maternity. I am aware that I am touching upon questions around which the over-sensitives have thrown a veil, which no one has dared to lift, and, for the present, I must say, "Rest in peace," and write of other matters. "L 'affaire du Cancer" has caused considerable comment. The President of the Society of Doctors and Surgeons of the Hospital at Reims, who was called upon by the President of the Administrative Committee of the Hospitals of that city, to investigate the truth of the public rumors concerning the "cancer affair" has handed in his report. The members of the Society hesitated to accept such a mission, but considering the articles that had been published—M. Dryer's letter, the Mayor's communication to the Municipal Council—they did not think it possible to avoid it. From the depositions of seven eye witnesses it appears that:

1. Doctor E. Dryer inserted pieces of a cancerous tumor of the breast, which he had just removed, into the opposite breast by means of an incision, which he made with a bistoury, and united said incision by means of sutures.

2. These fragments had not been submitted to any of the usual manipulations supposed to be capable of attenuating their virulence.

3. The fragments or "grafts" were introduced while the patient was still under the influence of chloroform.

The Society, once in possession of this information, requested M. Dryer to appear before it and explain. He at once declared himself, by letter, unable to accede to this request. The Society was thus forced to refer to M. Dryer's letter, in which three of his assertions in no way agreed with the depositions. He affirmed that the fragments had been submitted to manipulations, which had the effect of attenuating their virulence, that they were introduced with the idea of sparing the patient the pain of an operation.

The witnesses were unanimous in declaring that the patient had just been operated upon, with the exception of one, who did not know the origin of the inserted fragments; the others affirmed that the pieces were taken immediately from the extirpated tumor and without previous attenuation introduced on the spot into healthy tissues. With this evidence, the Society declared that M. Dryer had made, in the Hotel Diew de Reims, an operation which constituted a veritable cancer graft, and at once proceded to examine the question of responsibility. In his letter of August 1st, M. Dryer took refuge behind Doctor Dicis. The Society decided that at this time M. Dryer was a *Doctor*, and performed the duties of Chief of Clinic. These titles, says the report, are sufficient to render a surgeon responsible for his acts. The affair was then placed in the hands of the Prefect of the Maine, who has transmitted the documents concerning the affair to the Minister of the Interior. The history of experimental medicine records nothing more revolting, and it is a shame that the mantle of our noble profession should rest upon the shoulders of one so far removed from that ideal, erected by Hippocrates and inculcated by the physician's oath—but

"telle est la vie."

M. J. Lucas, Championnière at the Académie De Médicine, Seance, 25th of August, gave an interesting report of his operations for the radical cure of hernia without strangulation. Since 1881, he has made 254 operations, having lost but two cases; 222 of these were inguinal, 205 were men, 59 congenital. He states that among the inguinal hernias the congenital variety gives the most satisfactory results, his operations for umbilical hernia have, however, given him the most striking results. He considers the danger run by patients submitting to this operation very small, but makes a few reservations. He does not advise the operation for very young children—for subjects over 40, except in the presence of pressing indications. In general he would operate upon all subjects wishing to dispense with a bandage, those whose labors demand it, those whose social position would be benefited by the disappearance of the hernia.

In case of military service, of marriage, etc., etc., he makes an exception for diseased and cachetic subjects—those possessing such weak abdominal walls that hernias become multiple. He states that congenital, inguinal hernia should be operated upon *without* exception, especially if it be accompanied by some testicular ectopia.

Lysol, the new antiseptic, is used to a small extent here. Koch recommends it in a recent article, stating that it is superior to Creolin.

We have a vacation now, and, as I am

anxious to visit the School of Hypnotists, at Nancy, I will write my next letter from that city.

Lucia Redding Thompson, M. D.,
Paris, France.

Selected Formulæ.

CARBOLIC ACID AS A LOCAL ANÆSTHETIC.

Dr. C. T. Meacher, in *Items of Interest*, an American Dental journal, suggests a 5 per cent. solution of carbolic acid in water as a local anæsthetic that is safe and reliable. Four or five drops should be injected under the gum on each side of the tooth to be extracted. He says in most cases this is effective, and where inflammation exists around the root the action is most satisfactory. Dr. Meacher thinks that with moderate care there need be no fear of constitutional symptoms arising, considering the small quantity used. M. Viau of Paris, who read a paper on the subject before the Société d'Odontologie in 1886, expressed his opinion that it was of quite as much power as cocaine, and did not produce any dangerous symptoms.—*Lancet.*

THE SALICYLATE AND THYMOLO-ACETATE OF MERCURY IN SYPHILIS.

Dr. Dzadek (*Med. News*) has employed intra-muscular injections of salicylate of mercury in a long series of cases of secondary and tertiary syphilis, and always with most satisfactory results. The solution used was as follows:

℞ Hydrarg. salicylatis.....gr. xvj--xxiv.
Mucilag. gummi arabici.....gr. viij.
Aquæ destillatæ .....f℥vss.
M. ft. suspension.

Of this, one Pravaz syringeful (♏xv) was injected at a time; this was repeated at intervals of three days. He selected the gluteal region as a site for injections. The time during which the cases were treated varied from three weeks to two months. The therapeutic value of the salicylate of mercury was especially remarkable in syphilitic affections of the skin and of the mucous membranes; syphilitic eruptions and slight relapsing forms yielded to the treatment in from two to four weeks. The local reaction was slight—even less than after the use of calomel and of the yellow oxide of mercury. In no case did an abscess form, either at the point of injection or in its vicinity. Infiltrations were rare, and the more pronounced symptoms of mercurialism did not develop.

He has also with advantage used the thymolo-acetate of mercury in several cases of syphilis. The formula of the aqueous suspension to be injected is as follows:

℞ Hydrarg. thymolo-acet.....parts 1.5.
Mucilag. gummi arab.....parts 0.5.
Aquæ destillatæ.....parts 20.
M. ft. suspension.

The injections of a seven per cent. suspension of the drug were made at intervals of three or four days. From six to ten injections suffice in most cases of recent and non-inveterate syphilis. He has especially observed the therapeutic value of the treatment in the early stages of the disease. Syphilitic roseola and the papular affections of the mucous membranes yielded after from four to six injections, or in from twelve to twenty days; the relapsing syphilides, after from two to four injections; the papular cutaneous forms and the ulcerative affections of the mucous membranes after from six to eight injections, or in from fourteen to twenty-five days; the pustular and tubercular affections of the skin required a larger number of injections. This method of treatment occasioned little pain; in no case did an abscess or considerable infiltration develop. During the last two years he has not encountered, as a result of the toxic action of mercury, disturbance of the digestive organs, of respiration (embolism) and circulation, or any general disorder of importance.

CANTHARIDES IN CARCINOMA.

Wolfert (*Norsk Magazin for Lægevidenskaben*, No. 7, 1891), in a case of previously operated and recurrent carcinoma of the left mamma, of the size of a walnut, cautiously administered, after extirpation of the node, the following:

℞ Tinc. canthaird. }
Vin. camph., } aa gm. 5. (fl℥jss).
Mucil. gumm. arabic, gm. 200. (fl℥iv).

The cancer did not recur, the patient married again, bore two children, and still lives.

In 1879 the writer treated a case of carcinoma of the pharnyx, with cachexia. Under the use of cantharides the symptoms not only were ameliorated, but the growth did not increase in size, the patient's strength returned, and the patient continued well. In 1880 he operated on a woman for a large carcinoma of mammary gland. The same treatment was instituted. The patient still lives free from any recurrence.

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LEADING ARTICLE.

ANÆSTHETICS IN OBSTETRICAL PRACTICE.

The value of anæsthetics in cases of other than normal labor is no longer a matter of dispute or a questionable practice. The benefits derived from their employment in such instances are manifold and patent to every obstetrical attendant. As to the propriety, however, of assuaging the sufferings of a woman in an ordinary case of normal labor, there is by no means a unanimity of opinion.

In the discussion on anæsthetics at the meeting of the *Medico-Chirurgical Society of Glasgow*, session of 1890–91, in the published report, edited by the secretary, J. Walker Downie, M. B., F. F. P., etc., we find two interesting papers upon this topic, from which we make some extracts.

The first paper:—"Anæsthetics in Relation to Midwifery," was discussed by DR. William L. Reid.

The speaker confined his remarks to the two main anæsthetic substances—chloroform and ether. Regarding the relative value of these agents in labor and operative midwifery, he considered them as both equally valuable in securing thorough anæsthesia, subject, however, to the restrictions to be made in the ensuing remarks. Referring to the mode of chloroform administration, he preferred a single ply of flannel on a small wire frame, upon which the anæsthetic was to be used with a drop bottle. With these agents, a mild anæsthesia can be readily kept up, and rendered more profound in the

course of a few minutes if occasion should require it.

For ether administration, he deemed the only safe plan the employment of a Clover's inhaler or some similar instrument.

Dr. Reid usually examines the heart before giving an anæsthetic, but the knowledge that heart disease exists, only makes him the more anxious to use chloroform or ether, because he thinks that in such cases the strain of labor is vastly more dangerous without an anæsthetic than with it. The same fact, he holds as true in patients with diseased kidneys.

In twenty-five years' experience with anæsthetics in midwifery practice, he had never seen a fatal issue; in fact, he had never even seen a woman in danger from the effects of these agents. In the major portion of his cases he had resorted to the employment of chloroform.

In his opinion, a lying-in woman is peculiarly fitted for escaping the dangers usually connected with the ordinary production of anæsthesia. The following causes seem to Dr. Reid to account for the great rarity of fatal results in obstetrical anæsthesia:

The left venticle of her heart is considerably hypertrophied, and so, less likely to weaken readily in its action.

2. She is kept in the recumbent position, and so, to that extent, defended from syncope.

3. The action of the heart is aided by the alternate relaxation and contraction of the uterus.

4. The anæsthesia tends to produce anæmia of the brain, whereas the labor pains give rise to engorgement of that organ.

In reference to the assertion that chloroform may kill the parturient woman by inducing post-partum hæmorrhage, the speaker from his experience was inclined to the belief that there is some truth in this view, but he also thought that the danger could be averted by the hypodermatic injection of ergotin, and by manual compression of the uterus.

Referring to the use of chloroform in labor, as being dangerous to the fœtus, inasmuch as it might be born so deeply under the influence of the drug as to be incapable of resuscitation, Dr. Reid thinks that he has good grounds for believing that, contrary to what one would most readily suppose, the child suffers but little risk from this cause. Why, with chloroform vapor circulating in the blood of the mother, the fœtus should not be in danger from the use of the drug, he is not able to explain satisfactorily. He mentions the fact that he has seen children born and cry lustily after a few seconds in cases where the mother had been deeply under chloroform for at least an hour, and, on the other hand, he has never seen a child born dead under circumstances in which he could reasonably attach blame to the use of the anæsthetic.

The conclusions reached by Dr. Reid regarding the use of chloroform and ether in midwifery are as follows:

1. In severe labor and ordinary operations he is content to use chloroform, in view of its convenience and safety under these circumstances.

2. In long and severe operations, especially when there is much loss of blood, he prefers ether, given by means of Clover's inhaler. This involves more trouble, but its probable greater safety ought to turn the balance in its favor.

3. He believes that it is advisable to have several medical men present when an anæsthetic is given, but thinks that it would be wrong to enforce this by law. [This remark of Dr. Reid is rendered necessary owing to the proposed enactment of a law in Scotland compelling the presence of two additional medical men, when an anæsthetic is to be administered. This question was put to a vote at one of the meetings of the *Medico-Chirurgical Society*, of Glasgow, which meeting was largely attended by representative men of the profession in Glasgow and the West of Scotland, and it was unanimously agreed "that no such legal enactment was required, and were any such law enacted it would in many cases be prejudicial and even dangerous to the patient."—Ed.]

The only other paper read at this meeting

upon the subject under consideration, was by Dr. Samuel Sloan, its title being, "Anæsthetics in Obstetric Practice."

In this paper, the author states that the more experience he has had with chloroform in obstetrical practice, the safer and the more valuable has he been led to consider it. He now administers chloroform, to the *obstetric degree*, in nearly every case of confinement. The length of time the patient is kept under its influence depends largely on the nature of the case. He has kept a patient seven hours under it. The method he uses is to pour a few drops of chloroform on a clean handkerchief which has been crushed and placed in a dry tumbler. This is held near the patient's mouth. Occasionally he allows the patient to hold it at first, partly to give her confidence; usually it is held by the nurse.

If the patient is in the second stage of labor and the pains are almost continuous, the chloroform is administered almost incessantly, but it is not given to the surgical degree; this being reserved for only serious and prolonged operations. Dr. Sloan states, in fact, that in what may be called minor obstetric operations, such as the application of the forceps at the outlet, or low in the cavity of the pelvis, he is in the habit of removing the chloroform entirely before beginning such operations, because the muscles are apt, under this degree of chloroform influence, to be rigid, and the patient whilst sufficiently under the drug to be free from conscious pain, is not sufficiently under it to be passive, and is yet too much under its influence to be able to control her movements. Chloroform in such cases, he thinks, is more of a hindrance than a help, bringing on reflex spasms of the vagina and hysterical restlessness as soon as the necessary manipulations are attempted. Dr. Sloan does not think that the patient suffers much by this withdrawal of the anæsthetic, since he finds that though no more chloroform is administered, the first time the patient fully recovers consciousness is when she hears the child cry. He never examines a patient's fitness for chloroform. Given to the extent as above, he has never witnessed a single case of after mischief attributable to the anæsthetic, not even a single case of sickness. He considers the recoveries more likely to be good than the reverse where chloroform has been *judiciously given.*

The two papers thus fully quoted express the views of our foreign colleagues upon the subject of anæsthesia in labor.

Here in this country, the leading obstetricians do not deem it essential to make it an invariable rule to administer an anæsthetic in every case of labor. They agree, that whenever painful or harassing complications arise which are liable to prostrate the patient and protract labor, an anæsthetic is indicated. Among such indications which call for the use of these drugs may be mentioned an unusually firm or resisting perineum, muscular spasms, œdema, a relatively large fœtal head or a relatively small pelvis, a vaginal cicatrix, a vesical calculus, a rigid os uteri, or an unusually sensitive nervous system, ill calculated to bear pain. In such instances an anæsthetic will not only shorten labor, but will prevent undue shock which would be sure to lead to profound prostration. It seems to us, therefore, that anæsthetics should at least be employed in all states of labor in which painful resistance to expulsion is encountered, or in which pain is unusually severe.

In unnatural labor—that is, a parturition which, if left undisturbed, would not terminate favorably either to the mother or child—the propriety of resorting to these agents cannot be disputed.

In fact, there seems to be no good reason why anæsthetics should not habitually be employed in cases of labor.

CORRESPONDENCE.

EXOSTOSIS OF THE ROOT OF LEFT LOWER DENTES SAPIENTÆ.

To the Editor of The Medical and Surgical Reporter:

A gentleman called at my dental office suffering from violent shooting pains in the

left side of the face and neck owing to a badly decayed tooth, which had previously been filled with amalgam filling, and which was removed by the advice of his physician. This gave him little or no relief. Finally he decided to have the tooth extracted. I applied all the necessary power that is required in the extraction of these teeth, which extract easily, owing to the space left for their development. After making my diagnosis, I excised through the alveolus and extracted the tooth, having three well-defined roots, but all had become exostosed. The hæmorrhage after the extraction was quite profuse, which in this case was a benefit. I syringed the cavity with carbolic acid (15 drops to an ounce of water) and plugged the cavity with absorbent cotton, saturated with the same solution, which I instructed him to remove after each meal and apply a new plug the same as I did. The next day he complained of a great deal of pain that soon subsided, and in a very short time the part came together very nicely. I have seen many cases of exostosis and I am of the impression that this condition is most marked in the lower teeth.

C. H. M. Neall, M. D., D. D. S.

A LAW CASE.

To the Editor of The Medical and Surgical Reporter:—At a meeting of the Greene County Medical Society on the 8th inst. the following resolutions were adopted:

Resolved, That we endorse the action of Dr. J. T. Ullom, chairman of the registration committee of this society, in arresting Dr. J. J. McClelland for violating the law relating to the practice of medicine and surgery in this county.

Resolved, That we hereby authorize the committee to take such steps which in its judgment may be necessary to enforce the law.

The grounds upon which the arrest was made, and which are admitted by both parties to the suit are as follows: One, Dr. McClelland of Columbus, Ohio, after advertising extensively in the county papers and otherwise has been making monthly visits to Waynesburg, this county, for the purpose of practicing medicine and surgery, and had prior to his arrest practiced to some extent at the above place in accordance with this advertisement.

An examination of the medical register showed that he was duly registered, but upon further examination of the records it was found that he had not in addition thereto procured a license as required by the Act of Assembly of 1877 relative to "itinerant" practitioners. The defense will claim that the whole of the act of 1877 was repealed by the act of 1881, and that the section of the act of 1877 requiring "itinerants" to take out a fifty dollar license is not, therefore now in force.

The act of 1881 makes no specific provision for "itinerants," but the tenth section reacts: "that all acts or parts of acts heretofore passed, and inconsistent with this act, be and the same are hereby repealed." The prosecution will claim that the section of the act of 1877 requiring "itinerants" to pay an extra license of fifty dollars is *not* "inconsistent" with the act of 1881, and is therefore in full force.

Drs. Ullom, Brock and Millikin compose the registration committee and they have been assured by the county commissioners that the latter will co-operate with the committee in the prosecution.

While the case will, of course, go before a jury, the question to be decided is really not one of fact, but simply a question of law, which so far as I know has not been passed upon by the courts.

If the Greene County Medical Society finds it necessary to take the matter to the higher courts, the Pennsylvania State Medical Society will, I have no doubt, come to our assistance if called upon.

J. L. Millikin, M. D.,
Cor. Sec'y. Greene County Medical Society.

Book Reviews.

INTERNATIONAL CLINICS. Vol. II. July 1891. J. B. Lippincott Co., Phila.

In general appearance of make up and divisional arrangement, the second volume of International Clinics follows that of the initial number. The general practitioner will, however, without doubt be rejoiced to find that the lectures presented in this volume, deal rather with the more common forms of disease as met with daily in an average practice, and that the unusual and rare text-book diseases, so many of which were discussed in the previous issue, have not entered its pages. While the latter are instructive and of much interest to many, we take it that the journal will find its widest range of usefulness in teaching the latest and best methods of combating diseases which are less unique.

The opening pages are devoted to a brief

biographical sketch of the late Joseph Leidy, M. D., a very good portrait of whom appears as a frontispiece.

In the department of medicine the first lecture is upon "Ulcerative Endocarditis" from a clinic by Dr. Wm. Pepper. The lecturer presents very full histories of two cases of this disease, tracing them with their various symptoms through their successive stages until death ensues. The records of the *post mortem* examinations are exceedingly full and instructive. The article is illustrated with well executed colored plates which show both the primary heart lesions and the secondary involvements of kidneys and spleen. Culture tubes with their growths in various stages of development are also depicted.

A lecture by Dr. Jas. C. Wilson upon "The Treatment of Typhoid Fever by Systematic Cold Bathing," detailing the results arrived at by this method of treatment (without the administration of medicines) in the German Hospital in Philadelphia, is highly interesting. The apparatus used and the method of preparing and administering the baths is described at length. During a service of 16 months, Dr. Wilson and his colleagues have thus treated 160 cases of typhoid fever, with the remarkably low mortality of 7 cases, less than 5 per cent. The patients so treated were not picked cases selected for an experiment by this method, but were just taken as they presented themselves at the Hospital for admission. The lecturer claims for this treatment—and his results certainly bear out his claim—that it is superior to any other yet used in typhoid fever.

Dr. Arthur Ernest Sansom of the London Hospital contributes an interesting lecture upon the "Pathology of Angina Pectoris," in which he carefully traces out the causes of that dread affection.

Dr. James Tyson in his lecture upon "Chronic Diffuse Nephritis" gives a full resumé of the latest knowledge regarding this disease, with very full directions as to its treatment. The significance of tube-casts of various kinds is thoroughly explained.

Dr. J. M. Anders' lecture upon "Lead Colic" is illustrated by a photograph of his patient in which the "wrist-drop" resulting from paralysis of the extensor muscles is excellently shown.

A clinic upon the "Permanent Cure of Hernia in the Groin" by Dr. Tiffany, of Baltimore, leads us into the department of surgery. The usual methods of suture of the ring and obliteration of the canal and sac are advised.

Dr. John Ashurst, Jr., contributes a clinic upon the methods of performing many of the rather more difficult but still rather common operations of the present day. He discusses the operations of "Removal of the Breast for Scirrhus; Stretching of the Sciatic Nerve; Excision of the Head of Femur; Hæmorrhoids; Finger Amputations; &c., &c." Many practical suggestions as to diagnosis, causes, and treatment of the different lesions for which the above operations are to be performed, are given and the steps of the various operative procedures are carefully set forth.

As the removal of a scirrhus the lecturer advises thorough cauterization of the whole exposed surface with a solution of zinc chloride. This following thorough removal of the cancerous mass enables one to give a more favorable prognosis, though the author believes the disease sooner or later will return. Nerve stretching is often successful in relieving obstinate neuralgia when all other measures fail. Especially it is better than resection of a nerve, which latter causes paralysis. Dr. Ashurst advises excision of the head of the femur when it and the acetabulum are carious and after the means in an earlier stage, for bringing about anchylosis, have failed. The result is a shortened but useful leg.

In a long lecture by Dr. John B. Deaver delivered at the German Hospital in Philadelphia, among other operations detailed are those of tracheotomy for cut-throat with a wound of large extent and an account of Wyeth's amputation at the hip-joint. But cases recovered and their treatment is fully described.

In the department of gynæcology and obstetrics, Dr. Palmer details the general management of confinement cases at the Cincinnati Hospital at some length and also presents a concise tabulated series of results since 1881.

Dr. W. Gill Wylie of New York follows with a lecture upon that troublesome disease "Endometritis." Its etiology is carefully considered and its treatment fully outlined.

J. Bland Sutton, F. R. C. S., of Middlesex Hospital contributes a carefully elaborated study in a clinic upon "The effects of double Ovariotomy and Oöphorectomy upon the Secondary Sexual Characters of Women." Dr. Sutton after very extended investigation concludes that—no unusual secondary sexual

characteristics develop; that atrophy of the breasts and obesity, regular menstruation, loss of sexual appetite and the existence of great physical change, is by no means a constant but rather an unusual sequence to these operations.

"Habit in Reference to Sleep and Sleeplessness" by Macfarlane of Glasgow, and a case of "Compression of the Spinal Cord due to Fracture of the Vertebræ" by Starr of New York are prominent lectures in the department of neurology.

Ophthalmology, dermatology, and otology are represented as before by lectures of Jackson, Duhring and Burnett.

In the present volume thirty-eight clinical lectures covering the whole ground of the practice of modern medicine, divided as it is into its various specialties, from the leaders in modern medical thought and experiment, make this number of the clinics a valuable text-book to all.

PERISCOPE.

THERAPEUTICS.

IODOLE AND ANTIFEBRIN IN CEREBRO-SPINAL MENINGITIS.

The perusal of Dr. M. I. Krotkoff's paper (see below) has recently induced Dr. Vladimïr I. Sübbotin, of Balashov, (*Meditzinskoie Obozrenie*, No. 18, 1890, p. 495), to try Iodole and Antifebrin in a severe case of sporadic Cerebro-spinal Meningitis. Like his predecessor, the author obtained truly brilliant results. The patient, a previously always healthy, robust merchant of 18, fell ill on July 30th. When first seen by the writer, on August 8th, the lad was suffering from excruciating headache (especially about the back of the neck), some impairment of consciousness, obstinate sleeplessness, frequent nausea and diarrhœa, anorexia, fever (39.5° C.), photophobia, meteorism, abdominal tenderness. There were also present flushed face, congested eyes, myosis, slow reaction of the pupils, herpetic rash around the mouth, thickly-coated tongue, dry and hot skin, scanty rubeola over the chest and abdomen, weak pulse (95 per minute), and general prostration. During the night there appeared severe bilious vomiting of several hour's duration. On August 6th there supervened aching pain and numbness about all limbs, tenderness of the cervical vertebræ, retraction of the head, and rigidity of the posterior cervical muscles. On August 7th, the patient's left extremities were found completely paralyzed and affected with cutaneous hyperæsthesia, the wrists and fingers contracted. Up to this day the case had been regarded as one of enteric or typhus fever, and treated as such. Cerebro-spinal Meningitis was now diagnosed, and the following combination resorted to:

℞ Iodoli purissimi.....0.30 grammes.
Antifebrini.....0.18 "

M. f. pulvis. D. S.—A powder every three hours.

Besides, the following adjuvant means were ordered: 1. Four Milanese blisters to the back of the neck (2) and mastoid processes; 2. Ice compresses to the vertebral column, below the blisters; 3. Irritant (saline) enemata; 4. A hypodermic injection of $\frac{1}{12}$ grain of Morphine (in view of insomnia); 5. Beef and milk, in tablespoonful doses, repeated at short intervals. A steady improvement set in from the beginning. On August 17th, the Iodole powders were discontinued. On August 20th, the patient got up perfectly well.

In the *Meditzinskoie Obozrenie*, No. 17, 1889, p. 389, Dr. Krotkoff, of Saratov, has published two cases of typical Cerebro-spinal Meningitis, referring to girls, aged $4\frac{2}{3}$ and 9 years respectively. In the former case, the treatment was commenced on the third, in the latter on the first day of the disease, the little girl receiving 0.05 gramme of Iodole and 0.08 of Antifebrin, the older 0.12 of Iodole and 0.2 of Antifebrin, four times a day. The former was completely well on the twentieth day (of the symptoms), the other on the tenth. Considering the formidable character of the disease in question, one cannot help hesitating to attribute the extremely happy issue of the three cases to the treatment adopted. A more extensive series of clinical experiments in the same direction might elucidate whether the two authors had to deal simply with a happy, but blind, coincidence of the events, or really happened to come across a surprisingly efficacious means of lowering the enormous mortality from Cerebro-spinal Meningitis. — *Merck's Bulletin.*

ON THE ABORTIVE TREATMENT OF HERPES BY THE APPLICATION OF EITHER PURE ALCOHOL OR OF AN ALCOHOLIC SOLUTION, AFTER THE METHOD OF PROFESSOR LELOIR.

The treatment of herpes by applications of pure alcohol or of alcoholic solutions sug-

gested itself to M. Leloir under the following circumstances. He himself became subject to intermittent attacks of herpes labialis, and it occurred to him to try the effect of an application of Eau de Botot at the moment when the eruption began to make its first appearance. At the end of some minutes, he observed that not only had the pain entirely disappeared, but that the progress of the eruption was also arrested. In three-quarters of an hour the applications of Eau de Botot had completely stayed the herpetic eruption. Since then this remedy, as employed by M. Leloir in both clinical and private practice, has given most remarkable results.

In his inaugural dissertation M. Dupas has further developed the theories advanced by M. Leloir in one of his clinical lectures given at the Hospital St. Sauveur in the year 1885. He proceeds to explain the symptomatology and pathological anatomy of herpes. He next gives a short critical history of the various kinds of treatment practiced for herpes previously to that adopted by M. Leloir. Under the influence of treatment with alcohol, says M. Leloir in his clinical lecture, it will be found that at the erythematous stage of the disease the complete disappearance of the eruption is the rule—and that too, very rapidly—within a few hours, or even less, if the treatment has been sufficiently energetic.

When the herpes has reached the stage of vesication the disappearance of the eruption should take place in a few days at most.

When the disease has reached the period of vesico-pustulation, or even that of pustulation, it will be found that the duration of the eruption is very considerably shortened, The vesico-pustules and pustules subside and dry up with great rapidity. The same remark applies to the congestive inflammation of the surrounding epidermis. With this treatment you may see a violent attack of either ordinary herpes or herpes zoster develop and be completely cured, all in the course of a few days.

Nor is it on the eruptive element only that this treatment exercises a beneficial influence. It may be affirmed in a general way that the pain at the seat of the eruption is always lessened in a remarkable manner, and the same is true in most cases of the neuralgic pains in adjacent parts.

M. Dupas then passes in review the various forms in which M. Leloir makes use of alcohol. At first, about the year 1882, M. Leloir generally employed Eau de Botot or alcohol 90 degrees in strength. In 1884 he used alcohol of 90 degrees strength with a slight admixture of carbolic acid, which seemed to him to lessen the burning sensation, and even the element of pain. Since 1885 he has prescribed in succession alcohol of 90 degrees with a slight addition of either resorcin, thymol, or menthol.

The following are some of the formulæ preferred by Professor Leloir:

1.	Alcohol of 90 deg.,	100 grammes.
	Resorcin, pure, .	2 grammes (*i. e.*, 10 grains to the ounce.
2.	Alcohol of 90 deg.,	100 grammes.
	Thymol, . .	1 gramme (*i. e.*, 5 grains to ℥j).
3.	Alcohol of 90 deg.,	100 grammes.
	Menthol, . .	3 grammes (15 grains to ℥j).
4.	Alcohol of 90 deg.,	100 grammes (or ℥j).
	Thymol, . .	1 gramme (5 grains).
	Resorcin, . .	2 grammes (10 grains).
5.	Alcohol of 90 deg.,	100 grammes (℥j).
	Menthol, . .	3 grammes (15 grains).
	Extract of Cannabis Indica, . . .	5 grammes (25 grains).
6.	Alcohol of 90 deg.,	100 grammes (℥j).
	Phenic acid, . .	25grammes(about 1 grain).
7.	Alcohol of 90 deg.,	100 grammes (℥j).
	Phenic acid, . .	2 grammes (about 1 grain).
	Extract of Cannabis Indica, . . .	4 grammes (20 grains).
8.	Alcohol of 90 deg.,	200 grammes (℥j).
	Resorcin, . .	6 grammes (15 grains).
	Hydrochlorate of Cocaine, . .	1 to 4 grammes (2½ to 10 grains).
9.	Alcohol of 90 deg.,	50 grammes (℥j).
	Tannin, . .	6 grammes (ʒj).
10.	Alcohol of 90 deg.,	50 grammes (℥j).
	Tannin, . .	5 grammes (50 grains).
	Chlorhydrate of Cocaine, . .	1 gramme (10 grains).

11. Alcohol of 90 deg.,	500 grammes (Oj).
Extract of Cannabis Indica, . . .	25 grammes (25 grains).
Hydrochlorate of Cocaine, . . .	6 grammes (6 grains).
Essence of Peppermint,	50 grammes (6 minims).

These different solutions are applied by meams of pads made of wadding frequently renewed during the day.

M. Dupas concludes by bringing forward some very convincing cases in support of his views.—*Jour. Dermatology.*

CHLORIDE OF METHYL AS A LOCAL ANÆSTHETIC.

Dr. S. E. Berezovsky (*Letopis Khirürgitcheskaho Obshtchestva V'Moskve,* December, 1890) describes experiments on dogs which he has made with the object of testing the anæsthetic action of chloride of methyl, as well as its effect on various animal tissues. The substance was used in the form of a spray. The experiments showed that: 1. a spray of two seconds' duration, when directed against intact integuments, produces complete anæsthesia lasting from fifteen to twenty seconds, the tissues remaining sufficiently soft to allow cutting; 2. a spray of five seconds' duration, while inducing a somewhat longer anæsthesia, freezes the skin to an inconvenient degree; 3. a seven seconds' spray gives rise to consecutive local congestion and inflammation; 4. a twenty seconds' spray causes sloughing of the tissues down to the muscular layer; 5. a convenient and harmless anæsthesia induced by a two seconds' spray, can easily be prolonged up to five minutes by repeating the spray at short intervals; 6. sufficient anæsthesia of exposed bones can be produced in the same way; 7. the spray does not cause either gangrene or thrombosis of blood vessels. The author next employed chloride of methyl (a spray of two seconds' duration, repeated according to the necessities of the case) as a local anæsthetic, in a long series of operations, such as circumcision for phymosis (4 cases,) removal of elephantiases of the prepuce (1,) evulsion of toenails (2,) excision of cancer of the lip (2,) and atheroma (3,) large-auricular dermoid (1,) incision for empyema (2,) scraping out tuberculous ulcers and fistulæ, etc. The results were invariably most satisfactory, the operation being in all cases absolutely painless from the beginning to the end, while the healing of the wound left nothing to be desired, even in badly-nourished patients. The only disagreeable effect was a burning sensation at first; this, however, quickly gave place to complete numbness of the area sprayed upon. On the whole, the writer concludes that the chloride of methyl spray can be employed in all cases where an ether spray is used as a local anæsthetic; and that the former should be preferred to the latter, since 1. it induces anæsthesia "comparatively more quickly" than ether spray; 2. chloride of methyl is uninflammable, and hence can be safely employed in cases of cauterization, etc.; 3. it does not undergo any change from exposure to light or air; 4. it does not irritate mucous membranes even in children; and 5. it is cheaper than ether, since only very small quantities are required.—*Brit. Med. Jour.*

A NEW TREATMENT FOR CANCER.

Professor Adamkiewicz (*Przeglad Lekarski*), who has been for a long time engaged in the study of the poisonous nature of carcinoma, published in the form of a short notice, the successful treatment of 3 cases. No information is given concerning his method of treatment,—a sad imitation of Koch,—only that "he succeeded in producing atrophy of disseminated cancerous tumors." The remedy will be made public when his experiments and clinical observations are finished. The remedy does not elevate the temperature, and does not act injuriously upon healthy organs; nor does it affect the general state of the patient.

In 2 cases, with cancer of the lower lip under treatment by the new remedy, the lymphatic glands diminished in size and local reaction appeared. Microscopic examination of the cancerous tumor and the lymphatic glands showed "that the tissue was rarefied on account of the disappearance of cells."

In the third patient, also with cancer of the lower lip, all the tumefied glands of the neck (13 in number) almost entirely disappeared. The tumor itself was changed in its appearance and dimensions. The hard tumefaction in the mucous membrane around the mouth disappeared. Speech, whistling, and smoking became easy; the body-weight increased 4.20 kilogrammes (9¼ pounds,) in 5 weeks.

ATROPINE IN ENURESIS.

The following is a brief account of a trial

with atropia in 12 chronic bed-wetters in the New York Infant Asylum, Mt. Vernon, N. Y: Nine boys and three girls, the ages ranging from 4 to 10 years, were selected for treatment. It is a custom in the institution to put the children to bed at 6 o'clock and to take them up at 10 to urinate. Being desirous of testing the value of atropia, the habits of life were not changed. The plan of treatment was that used by Dr. Wm. Perry Watson. A solution, consisting of 1 gr. sulphate atropia to 1 oz. distilled water; of this one drop was given for every year of age of the patient, at 4 and 7 P. M.; one-half of this quantity was given, however, in each case for the first few days; no unpleasant symptoms followed, and the full amount was given. Physiological symptoms were produced in three, but were unimportant. After six weeks slight improvement was noticed in four; at the end of the third month these four wet but once or twice a week. Seven were well at the end of the fifth month, rarely wetting. Treatment continued two months longer, when the dose was reduced one-half; this was given two months and stopped. It is nine months since treatment was stopped, and there has been no return of the trouble. The other five, which includes the girls, showed but slight improvement at the end of the fifth month of treatment, wetting nearly every night. During the next three months improvement was gradual, and at the end of the eighth month they wet not oftener than twice a week. During the tenth month there was only an occasional wetting. The dose was reduced one-half, and after a year of continuous treatment there was no wetting. The atropia was stopped, and there has been no return of the enuresis in six months. Eighteen months ago we had 12 chronic bed-wetters of the worst order; to-day they are well—the only medicine used was atropia, given as above.—*Archives Pœdiatrics.*

MEDICINE.

MYXŒDEMA.

The author Buzdygan reports two very minutely observed cases of this disorder, to which the English physician, Ord, first gave the name "Myxœdema," Charcot "cachectic pachydermique," and which is identical with Kocher's "cachexia strumipriva." The first case was that of a female, aged thirty-four; the other; a tailor, fifty years old. Both cases exhibited entirely those characteristic symptoms described by Ord, namely;

1. Characteristic œdema of the skin of the face, us well as of both extremities, thickness of the mucous membrane in the oral cavity, considerable enlargement of the tongue.

2. Changes in the thyroid gland; in one case fibrous degeneration, in the other atrophy.

3. The affection of the nervous system was reduced in both cases only to diminution of the memory and depression of intelligence.

4. Lymphatic glands enlarged.

5. Voice changed, depending on hypertrophy of the mucous membrane of the larynx. This latter may also cause dyspnœa.

6. The changes in the blood are not distinct, no leucocytosis being present, as some authors have reported.

7. Paræsthesiæ in separate spots on the skin, itching, burning, as well as conjunctivitis catarrhalis, caused, according to Landau and Ewald, by irritation of the sympathetic nerve.

8. Both cases prove that after the process of digestion, mucin appears. In one case mucin also was found in the urine.

9. Temperature always subnormal (36.1° C.).

10. A certain connection between the changes in the genital apparatus in females and myxœdema can be accepted. In one of the author's cases menstruation had already ceased in the 28th year, four years before the appearance of the disease, and examination showed atrophy of the uterus.

11. As to the relation between the two sexes, ten females to one man is the generally accepted ratio.

12. Myxœdema mostly occurs in adults (over thirty years.)

13. The treatment in both of the author's cases, as in general, was without effect. Death always follows with the symptoms of collapse or uræmia.—*Gaillard's Med. Jour.*

FORCED RESPIRATION OF OXYGEN.

Dr. G. E. Fell, of Buffalo, records in the *Journal of the American Medical Association*, June 6th, 1891, two interesting cases in which forced respiration of oxygen was used to combat the effects of overdoses of morphine. In the first case forced respiration by means of a face mask was first tried, but without much success. Tracheotomy was then performed, and continuous forced respiration maintained through the tube. With the sole exception of the still con-

tracted state of the pupils and the absence of cyanosis, there were at first no signs of life observable. The pulse and heart beat were quite imperceptible, but little by little they returned, and after twelve or fourteen hours of uninterrupted forced respiration the patient had so far recovered as to be able to breathe for herself, and she ultimately made a good recovery. In this case Dr. Fell observes, "artificial respiration would at no time have been of any avail to the patient." The second case was similar in some of its features. The face mask had again to be abandoned in favor of respiration through a tracheotomy tube, the gas being found to pass into the stomach and bowels as well as into the lungs. Improvement was noticed for a time, but an unlucky act of vomiting was followed by the entry of solid matter into the lungs and sudden cessation of the heart's action. The amount of labor entailed in the maintenance of this continued forced respiration is described as very great, and only possible by the help of "an army of students."—*Brit. Med. Jour.*

THE PULMONARY COMPLICATIONS OF STRANGULATED HERNIA.

From an article by Dr. J. Lesshaft, of the Berlin Pathological Institute (Virchow's *Archiv*, 123, iii.,) it would appear that the frequency with which pneumonia follows upon the reduction of strangulated hernia—operated on by taxis or by herniotomy—and the relation which such lung trouble bears to the intestinal lesion have both been variously estimated. Dr. Lesshaft is mainly concerned in correcting the impression conveyed by Dr. v. Pietrzikowski, who has recently maintained that pneumonia (as judged by clinical signs) is comparatively frequent in these cases, and who further supports the views held by Gussenbauer as to its causation. These views refer the pulmonary condition to embolism following upon thrombosis in the veins and capillaries of the walls of the strangulated bowel, in those cases at least in which no other explanation—e. g. by direct extension from peritonitis or pyæmia—can be afforded. Dr. Lesshaft, on the contrary, after an analysis of all the fatal cases of hernia examined at the Berlin Pathological Institute during thirty years, thinks the hypothesis of embolism is not justified on pathological grounds. He shows that the circumstances under which pneumonia occurs as a sequel to strangulated hernia, and the character of the pulmonary lesions, are such as may well be explained by the entrance into the air passages of vomited matters. The condition, therefore, is one of *Aspirations-pneumonie*, or *Schluck pneumonie*; and that it should be more liable to occur in cases of severe strangulation, or those in which gangrene of the gut takes place, is not surprising, since these are just the cases in which vomiting is most likely to be severe. Pietrzikowski has adduced experimental proofs in support of his thesis, which, however, are not substantiated by Dr. Lesshaft, who found that in the rabbit, pneumonia never followed artificial strangulation of the intestine; and in the dog it only occurred when it was possible for the aspiration of vomited matter to take place. Indeed Dr. Lesshaft is convinced that pulmonary infarctions do not occur in connection with the intestinal changes.—*Gaillard's Med. Jour.*

RECENT RESEARCHES ON THE RELATIONSHIP OF MENTAL TO CEREBRAL PROCESSES.

One of the most interesting of Dr. Münsterberg's researches is that which relates our sense of time duration with the respiratory act. After a most laborious investigation experimental results as to the perception of duration were found to be quite contradictory. There had been no want of ingenuity or precision in the observations. Münsterberg perceived that the discrepancy in the results must depend on the investigators themselves. He discovered that the cause is due to the fact that inspiration increases and expiration diminishes the power of attention, and that the respiratory rhythm is affected byattention. He thus demonstrates a wholly unsuspected relation between our estimate of the passage of time and muscular sense. Nor is this all. Reasoning on the lines of natural selection and the evolutionary hypothesis, he says: "An external stimulus can only have significance in preserving the organism if it have a centrifugal effect." Sense stimulus issues, for the most part, in muscular contraction; it issues in contraction, but not necessarily in movement, for we may have, of course, equilibrium due to the opposed contraction of antagonistic muscles. Thus, even when we sit down in the easiest position in our most comfortable arm-chair, and, letting the muscles go flaccid, set ourselves to think, we shall nevertheless be able to recognize the strain of antagonistic muscles, and discover a certain rigidity of the neck. His attention being thus directed to the importance of the muscular sense, Dr. Münsterberg instituted an elaborate series

of experiments which would tend to show that all our capacity of measuring quantity is dependent on feelings of strain which arise from muscular tension. Feelings of quantity differ from feelings of quality, in that the greater contains the less. Dr. Münsterberg thus resolves all measures of duration in time and extension in space into dependency on the varying quantity of muscular sensation. The small muscles of the eye and ear would thus come to play an importont part in acquainting us with varying intensities of visual and auditory phenomena. Dr. Münsterberg, therefore, boldly proceeds on this basis of muscular strain to measure and reduce to a common standard the intensities of the different senses. Unfortunately, in this series of experiments, Dr. Münsterberg allowed himself to become the subject of experiment. It remains to be seen, by a careful repetition of these experiments in other hands, how far subjective expectation was a factor in the results.

Like Herbert Spencer and many others, Münsterberg would appear to desire to resolve our notions of time and space into simpler elements. But, as Professor Ladd observes: "To describe the rates and order and duration of successive ideas is a very different thing from explaining the idea of succession," we may show what contributes to the developed notion of time and space in the evolution of the individual, but the Kantian position would certainly appear to be impregnable. No collocation of sensations can possibly amount to the forms of time and space, for they are associated only in time and space, and to attempt to derive that in which they inhere from them is what is popularly called "putting of the cart before the horse."

Valuable as it is to correlate the physical chain with conscious experience, it should ever be remembered, to use Münsterberg's own metaphor, that the physical chain is known only within the "fixed eye" of consciousness. When we use the phrases "cause," "external world," "matter," etc., we use terms which have a meaning in consciousness alone. In referring the consciousness of the individual man to that which lies without him, we establish a relation. But what meaning has relation except as for that which experiences the relation, namely, conscious thought? A relation divested of all known quality is non-existent. When all our psycho-physical labors are concluded the criticism of consciousness remains. As Dr. Münsterberg himself informs us, it is idle to seek in physiology a meaning for the fact of consciousness itself. The criticism of the nature of consciousness must be found, if anywhere, within consciousness itself. Such a criticism, so far as it has been made, has long recognized the impossibility of an entity or thing-in-itself, which neither thinks nor feels. But, of course, this is *caviare* to those who eagerly swallow a cheap and easy materialism. Those who identify a physical with an ontological explanation are the worst of metaphysicians, because they are wholly unsuspicious of the fact that they are so. They adopt a hypothesis, the presuppositions of which they have never attempted to analyze. They remind one of the famous personage who:

> Was certain that the world is square,
> Because she'd travelled fifty miles and found
> No sign that it is circular anywhere.

—*Brit. Med. Jour.*

A CASE OF CONGENITAL HYGROMA.

Dr. Benjamin Ipavic (*Wiener med. Wochenschrift*, No. 24, June 13th, 1891) relates a case of congenital hygroma of the left axilla cured by antiseptic drainage. The patient, a boy aged 2 years, was born with a tumor the size of an apple, situated well on the outer side of the left nipple. During the first year it grew very slowly; towards the end of the year a navel-like depression appeared near its middle, and the tumor diminished somewhat. In the second year it grew rapidly and extended into the axilla. On the side of the thorax it reached as high as the clavicle, and its inferior limit corresponded to the fifth rib and presented all the typical characters of a congenital hygroma. An incision was made on the outer side of the cyst, 4 centimetres long, and a tolerably large quantity of yellow fluid, partly blood-stained, was evacuated. A counter-opening was made, a drainage tube inserted, and carbolized dressing applied. The whole of the hygroma did not collapse with the first incision. Fifteen days later a fresh incision and counter-opening was made and drainage continued. During convalescence the child contracted measles. The first opening was made on March 13th; by the end of June the cyst had shrunk to the size of a walnut, and the openings cicatrized. This, with some adjacent loose skin, was excised. At the end of July the wound was completely healed and the child in good health.—*Brit. Med. Jour.*

SURGERY.

THE TREATMENT OF VARICOSE VEINS.

Dr. William Taylor, in the *Provincial Medical Jour.*, advocates blistering. He discovered its good effects, accidentally, when treating a case of gout by means of blisters, and had since tried it in many cases with considerable success, and found it specially useful in old people. He considered blistering to be "eminently restorative" in varicose veins. Dr. Taylor did not believe in elastic stockings, and considered operative treatment unscientific. He supposed that the coats of the veins participated in some way which he could not explain, in the restored vitality set up by the action of the blisters. He found that the veins remained sound for several years, but were then apt to become distended again, and required the treatment to be renewed. Its great advantage was that it could be used in cases where palliative treatment was contra-indicated, and that it always did good to the solid œdema so often associated with the varicose condition. The details of the treatment were as follows: 1. Remove the cause. 2. Obviate the tendency. 3. Elevate the limb for twenty-four hours. 4. Blister from the foot upwards, six inches daily, watching the kidneys and bladder. First paint the part with Rubini's tincture of camphor, then with blistering fluid, and lastly with collodion. The blisters must rise and serum be withdrawn to do good. 5. When whole limb is blistered, apply plaster to the whole length of the vein for two weeks. 6. Remove the plaster and see what is the result of the treatment. If the veins bulge, blister again; if they are all right apply more plaster, and allow gentle exercise for a week. If at the end of that time the veins are still in good condition, no further treatment is needed.

Landerer, in the *Med. Press*, May 20, 1891, details a new method of treating varicosities. This consists in the application of a kind of truss, that was applied like a garter, and by its permanent pressure on the saphena vein effected a cure. Pressure was obtained by an india rubber pad situated on the inner surface of the truss and filled with water. The pressure was constantly kept up until the wall of the dilated vein was ulcerated through. He had adopted this method of treatment from an observation of a deceased colleague, Herr Ravoth, who treated varicoceles by the application of a truss.

Tobin gives particulars, in the *Dublin Jour, of Med. Science* for June, 1891, of a case of septic phlebitis treated by him, in which the disease was secondary to the removal of portions of varicose veins, and originated not in the operation wounds but in a small ulcer near the ankle. On the ninth day after operation symptoms of acute septic phlebitis were fully developed. The patient had had two marked rigors; temp. 105° All the superficial veins on inside of leg and three inches of long saphenous vein were engaged. Mr. Tobin reflected the skin from the affected parts and removed every diseased vein, following each till an apparently sound point had been reached. The subsequent history was satisfactory. The wound healed rapidly. No further rigor occurred. Severe constitutional disturbance, indicating that secondary centres of infection had formed during the delayed interference, continued, and it was not till a month after the operation that the patient's temperature was normal, and his condition in every way satisfactory.—*Epitome.*

RELATION OF MALARIA TO SURGICAL OPERATIONS.

Dr. M. Perez (*Annals of Surgery,*) says one should avoid as much as possible operations in places or districts where malaria prevails. In cases of operation upon individuals residing in malarial districts, or even those who have formerly dwelt in such regions, although they may never have presented malarial symptoms, they should be subjected to a preliminary treatment by quinine, in order to avoid complications.

Individuals may be met with in whom there is a latent existence of the germ of malaria. These latter may develop when the strength of the patient has been lowered by hæmorrhage, suppuration or other causes.

If one had to decide between a bloody and a bloodless method of operation, the latter should be chosen, for beside avoiding hæmorrhage, a mixed infection is thus prevented.

In cases where operation on account of some suppurative process is necessary, and were malaria has formerly existed, a careful analysis of the urine and an examination of the liver, spleen and kidneys should be made, for the patient may be suffering from diabetes or amyloid degeneration.

If hæmorrhage or intermittent pain follow the operation, they may be combated by the various preparations of quinine.

TREATMENT OF PENETRATING WOUNDS OF THE ABDOMEN.

Dr. Lanphear concludes as follows:

1. All cases of penetrating gunshot wounds of the abdomen demand laparotomy; most others also require it.

2. The operation should be done immediately after the injury, if possible, so as to control bleeding before the patient is exhausted.

3. Any time within twelve hours may be regarded as the "time of selection," but the lapse of many hours, or even days, need not prevent operation, since death from septicæmia is likely to occur.

4. A condition of collapse is not an insurmountable contra-indication.

5. The existence of peritonitis demands rather than forbids, an operation.

6. In gunshot wounds Senn's hydrogen gas test should not be employed, as the indications are *always to operate;* perforation of intestines is not necessary to render the wound fatal. In other penetrating wounds the test may be employed.

7. Laparotomy is, in such cases, comparatively an insignificant operation. Any surgeon of ordinary skill ought to be able to successfully operate.

8. In case of emergency, the operation here described can be made without an elaborate set of instruments. A success can be obtained by the use of only: (*a*), a knife; (*b*), scissors; (*c*), needle and thread; (*d*), hæmostatics; and (*e*), *good judgment.* —*Medical Review.*

THE PRESENT STATUS OF THE TREATMENT OF URINARY CALCULUS.

Every few years we find the practice in any particular form of disease undergoes radical changes, so that the methods in vogue in the near past are almost entirely superseded by newer and more modern ones; or possibly, the profession reverts to an operation largely practiced in the past, one which has remained quiescent for a number of years, only to be again brought forward.

In regard to the affection under consideration, the modern (present day) sentiment appears to be as follows:

1. Wherever possible, resort to litholapaxy.

2. If litholapaxy is contra-indicated by a sacculated bladder, a high degree of cystitis, stricture of the urethra, or an irritable, contracted bladder, one of the cutting operations must be performed.

3. If the stone is not very large, and can be extracted by that method, the median perineal method is preferred.

4. If the stone is very large, or if there is reason to suspect the co-existence of tumors of the bladder, or any reason calling for a complete exploration of the interior of the bladder, resort should be had to supra-pubic cystotomy.

5. The existence of cystitis, or other necessity for drainage of the bladder, calls for the lateral operation.

From the above summary it at once becomes evident that the range of lateral lithotomy has been largely curtailed, while that of litholapaxy has been wonderfully increased. In fact, the crushing operation is now almost universally recognized as the operation of choice whenever possible. The grounds upon which this decision rests are that the crushing operation is less risky; it is applicable to all ages; the time of convalescence is very short compared with the other operations, and the mortality is much lower.

The chief objection against litholapaxy is the possibility of leaving some fragment of the stone in the bladder, to act as a nucleus for a new stone. This oversight has frequently occurred, but the fragment has always been detected early, and is easily removed by reintroducing the lithotrite.

The dangers and difficulties of the median operation are usually slight, but its range of successful application is limited. The time necessary for the healing of the wound is an objection.

Supra-pubic cystotomy is somewhat difficult of performance, more paraphernalia are required, and the dangers of complications are perhaps greater than those of any other operation for the relief of this trouble.

At present the tendency is to almost entirely banish lateral lithotomy from the list of surgical procedures applicable to this affection, preference being given to either the median or supra-pubic operation. Time only can determine whether this condition of affairs will continue or not. Some surgeons still cling to the lateral incision, and are loath to discard it.

In this paper we have endeavored to present to our readers, in as concise form as possible, the views held by the leading surgeons of the day, and have aimed to avoid expressing any prejudiced or biased views. To sum the whole matter up in a few words, we can say—this is an age of litholapaxy.—*Cincinnati Lancet and Clinic,* May 30th, 1891,

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INGROWING TOE-NAIL.

Dr. Pürckhauer recommends the following method in the treatment of ingrowing toe-

nail: A forty per cent. solution of potassa is applied warm to the portion of the nail to be removed. After a few seconds the uppermost layer of the nail will be so soft that it can be scraped off with a piece of sharp-edged glass: the next layer is then moistened with the same solution and scraped off; this must be repeated until the remaining portion is as thin as a sheet of paper, when it is seized with a pincette and lifted from the underlying soft parts and severed from the other half. The operation does not require more than half an hour's time, is painless and bloodless, while the patient is delivered from his suffering without being disabled even for an hour.—*The Pittsburg Medical Review.*

GYNÆCOLOGY.

MASSAGE AS APPLIED TO THE TREATMENT OF INCONTINENCE OF URINE IN FEMALES.

At the February meeting of the Royal Academy of Medicine in Ireland (*Dublin Jour. Med. Science*, April, 1891) Dr. Bagat read a paper on this subject. He gave a full account of the treatment of this affection by the Brandt system, by Sänger's method, which consisted in dilatation of the vesical sphincter, and also by massage, by distension of the bladder with warm water, as practiced by Nissen and Marion Sims, junior. He had cured three cases by the use of Brandt's system, omitting some of the steps which he considered useless. The most essential part of this method of treatment was the direct treatment of the neck of the bladder by the finger in the rectum or vagina. In children one used the finger in the rectum. The first case was that of a woman aged 30, married eight and a half years, who had borne five children. She had suffered from incontinence more or less since her last confinement eighteen months previously, and had become worse during the last nine months, her water passing from her whenever she walked about, or on making any sudden effort, such as coughing. She frequently passed her water under her when asleep. Examination showed perineal laceration of the first degree, a rather patulous urethra, slight prolapse of the anterior vaginal wall, and vagina and perineum abnormally distensible; uterus and appendages normal; no abnormal tenderness or irritability of the bladder could be detected on passing a sound; the urine was normal. She was at first treated every day for four days by Brandt's system, omitting "the lifting" of the bladder. She was told to wear woollen drawers, and to try to control her sphincter whenever she felt the water passing from her. After this she was treated every second or third day for twenty-nine days. At the end of this time a permanent cure was effected.

The second case, an unmarried woman of 24 years of age, had suffered from childhood from enuresis. Two years previously she had been treated every second day for six weeks by electricity without benefit. Examination revealed nothing abnormal but a slight cervical catarrh, cured by the application of pyroligneous acid. She was treated by Brandt's system—omitting the "exercises for the adductors of the thighs" and "the bladder lifting"—every second day for five weeks, at the end of which time she was discharged quite well.

The third case was similar to the first. Incontinence on exertion had lasted three years. Treatment was carried on for four weeks; during the first week daily, only the "lifting" being omitted. Afterwards the treatment was performed every second or third day, and the tapotement of the lumbar and sacral regions, as well as the exercises for the adductors of the thighs, were also omitted.

Dr. Bagot discarded the bladder lifting, because it would be impossible to elevate and seize that organ by the manœuvre described by Brandt when it was empty; and, were the bladder full, the procedure could not be carried out on account of the sensitiveness of the organ. He failed to see how tapotement of the lumbar and sacral regions could be of any use in this affection, or in uterine displacement, and he had discarded it. The exercises for the adductors might be of use when the pelvic floor was greatly relaxed. The chief part of this method was the direct treatment of the neck of the bladder.

Dr. Bagot had treated two patients by the method of Sänger, who believed the basis of the affection to be paresis of the vesical sphincter with, perhaps, a certain tenuity of the muscular bundles. This method was not indicated when there was any very great dilatation of the bladder neck and whole urethra. In these cases, artificial narrowing of the urethra, by some such method as Schultze's or Pawlik's, was more likely to succeed. When the dilatation was not so great, Sänger advised that his method should be tried. Massage by distension of the

bladder with warm water was of use in cases of contraction of the bladder following long-continued incontinence of urine from any cause, such as fistula, or where patients had formerly suffered from cystitis of long standing. Dr. Bagot urged the necessity of a careful diagnosis in all cases, paying special attention to the urine and to the other pelvic organs. He found Dr. Nitze's cystoscope to work efficiently, and he employed this method of examination in all cases of bladder trouble. In reply to some objections by Dr. More Madden, Dr. Bagot said that, in applying massage where stroking movements were used, they were performed by the external hand through the abdominal wall, the fingers in the vagina being held quite still, and being used simply to raise and support the parts while being massaged. The internal hand did not move more than during an ordinary bimanual examination. He explained that he had not said he massaged the bladder, but its neck. This he considered the essential part of the Brandt treatment, and it could be applied per vaginum or per rectum, no matter how empty the bladder might be.

OBSTETRICS.

VOMITING OF PREGNANCY AND HYSTERIA.

Kaltenbach holds that the clinical history and the "cures" of cases of uncontrollable vomiting of pregnancy indicate that the disease is essentially due to hysteria. Pregnancy involves physiological and psychological conditions favorable to the development of hysterical symptoms in a modified form. Hyperæmesis is often cured by a process akin to suggestion, like ordinary hysteria. "Doing something," dilatation of the os, massage, etc., often succeeds if the practitioner gains the patient's confidence, and hosts of drugs have answered, apparently under the same conditions. On the other hand, all these vaunted medicines and operations have failed when employed by physicians who possibly did not possess as much tact as knowledge. Hyperæmesis may suddenly cease if the patient be alarmed, as in a case of the author, where the patient was reduced to a skeleton; a day being fixed for the induction of labor, her friends frightened her by saying that she could not survive such an operation. The vomiting ceased. The same sudden arrest of hyperæmesis was observed by Cazeaux in a young wife whose husband was seized with symptoms of strangulated hernia. In a third case, the vomiting ceased on the outbreak of an acute exanthematous fever. Kaltenbach describes a bad case where the patient, aged twenty-one, made an unhappy marriage, and was unkindly treated by her husband. Very severe vomiting set in during her first pregnancy, and she was sent into a Hospital. It was suggested to her that she had lumps of unwholesome material in her stomach, and that their removal would cure her. Some milk was given to her, ceremoniously, and shortly after the stomach was washed out. Its contents bore no indications of either over-acidity or any abnormal ferment. The patient was then informed that all was right, and that the vomiting would not return. It ceased accordingly, and she was safely delivered at term. In short, Kaltenback urges that hyperæmesis gravidarum should be treated as a purely hysterical complaint. Prompt treatment is indeed necessary, for as in hysterical vomiting of non-pregnant women the patient may, if at first neglected, die of syncope or nervous exhaustion even when the vomiting has been stopped. But isolation from domestic cares and imprudent friends, with appropriate moral treatment, should be enforced before so extreme a step as artificial abortion is undertaken.—*Boston Med. Surg. Jour.*

MORPHINE IN PREGNANT, PARTURIENT AND NURSING WOMEN.

Fürst (*Arch. d' Obstet. et de Gyn.*, March, 1891.) Owing to the contradictory opinions on the subject, Fürst has made a study of the effect upon the fœtus, of morphine administered to the mother. One woman during her first pregnancy had taken about 1,200 hypodermic injections of a three per cent. solution of morphia; during her fourth pregnancy 800 of a similar solution were taken. The children were well developed physically and intellectually—and they had not acquired the morphine habit. Before birth, however, the fœtus were quiet after the exhibition of the drug to the mother and the movements became painfully active when its effects passed off. From this and similar observations Fürst concludes that morphia does not compromise the life or health of the fœtus to so great an extent as has been assumed. Its moderate use in pregnant women is without danger and it may be given with advantage in the treatment of threatened abortion or premature labor. During labor its use is more dangerous, especially in pro-

longed labor. In nursing women the drug passes rapidly into the milk.

INCISION OF THE OS UTERI DURING PARTURITION.

Guéniot (*Jour. de Méd.*, March 22, 1891,) says that after one has tried various other means for overcoming rigidity of the os without success, one may be forced to have recourse to incisions, and he advises the following method in case incisions are decided upon: 1. Rigorous antisepsis. 2. The use of long and strong scissors, or in certain cases of a blunt-pointed bistoury. 3. The directing of the instrument with two or more of the fingers. 4. The pressure of the fingers within the uterus upon the uterine tissue in such a way that bridges or prominences will be thrown out which can be readily cut. 5. The multiplication of these incisions superficially in preference to diminution of their number with increased depth. 6. In cases in which it is advisable to limit the number of incisions to two or three, it is better to make them in the transverse diameter of the neck and so avoid wounding neighboring organs.

PÆDIATRICS.

THE RADICAL CURE OF HERNIA IN CHILDREN.

The various operations for the radical cure of hernia in children are discussed by Dr. Henry O'Neill in the *British Medical Journal.* In his opinion, the most suitable cases for operation are the following: 1. Those of children of the poor, who either are unable to buy trusses or can not look properly after their daily application. Unless a truss is properly fitted and applied it is worse than useless. 2. Those of children in whom the hernia is so large that an ordinary truss is not sufficient to keep it reduced while the child is running about at play. 3. Most cases where a truss has been worn for at least twelve months without improvement, or where the hernia is increasing in size. 4. Those of children who are likely to become laborers in later life. 5. Every case after kelotomy has been performed for the relief of strangulated hernia.

In deciding upon the method to be employed, each case must be treated according to its own peculiarities, and exposure of the sac is usually necessary before these can be ascertained. In congenital hernia Macewen's method is best. If the sac has been torn and the wound is not easily closed, the sac may be ligated close to the neck and cut off half an inch below the ligature, and the upper end of the sac sutured to the abdominal muscles above the internal abdominal ring. This is known as Bank's method. Barker's method may also be selected, by which the sac is ligated in two places and divided between the ligatures, the upper part being sutured to the abdominal muscles and the lower part retained in the scrotum.

The following conditions must be observed to insure success: The patient is to be prepared for the operation by being given a warm bath each day for several days, having the bowels kept free, being given a milk diet and being kept in bed. The parts are to be prepared by thorough washing with soap, then with alcohol, and finally with a solution of carbolic acid or creolin. All hæmorrhage is to be arrested, and the wound drained with a bone drainage-tube, chromicized catgut being used for sutures and ligatures. The bandage and the dressings, which should be of absorbent wool, are to be firmly covered with an India-rubber web bandage. The wound should be dressed seldom, and only when the discharges stain the outer dressings, or when the temperature rises suddenly above 101° F. An opiate may be given for two or three nights. An anæsthetic should be used for the first two dressings, to prevent the child from crying and straining the abdominal wall.

Mr. R. W. Parker also contributes a paper on the same subject, and describes his method of operating. An incision two inches long is made to expose the sac, which is then cleared of the looser and more external layers. All the adventitious structures are not cleared away, for the sac proper in children is very thin and liable to tear. The spermatic cord being put well out of the way, the sac is drawn down as far as possible and three or four stitches are put in, drawing the neck of the sac firmly together. The object is to retain the silk ligatures permanently *in situ*, or as long as possible. If drawn too tight they are apt to cut their way out and so lead to failure. The neck of the sac is now allowed to retract well back within the external abdominal ring, after which the pillars are drawn together and the wound is closed.—*N. Y. Med. Jour.*

HYGIENE.

GOUT AND FRUIT EATING.

In the last number of his *Archives of Surgery*, Mr. Jonathan Hutchinson says that he has for many years been in the habit of forbidding fruit to all patients who suffer from tendency to gout. In every instance in which a total abstainer of long standing has come under his observation for any affection related to gout he has found on inquiry that the sufferer was a liberal fruit eater. Fruits are of course by no means all equally deleterious; cooked fruits, especially if eaten hot with added sugar, are the most injurious, the addition of cane to grape sugar adds much to the risk of disagreement. Fruit eaten raw and without the addition of sugar would appear to be comparatively safe. Natural instinct and dietetic tastes have already led the way in this direction, few wine drinkers take fruit or sweets to any extent, and Mr. Hutchinson suggests as a dietetic law that alcohol and fruit sugar ought never to be taken together, and he believes that the children of those who in former generations have established a gouty constitution may, although themselves water drinkers, excite active gout by the use of fruit and sugar.—*Brit. Med. Jour.*

HYGIENE AND HOSPITALS IN ST. PETERSBURG.

In 1889 the 11 hospitals of the city ministered to nearly 50,000 sick persons—that is, to 5 per cent. of the entire population of the city. There should be reckoned besides in St. Petersburg 42 hospitals sustained by the different institutions, 40 infirmaries and dispensaries and 16 lying-in establishments. In general the municipal council devotes special attention to the department of public health. It has constructed an immense filter through which passes all the water that is distributed to the city; it renders healthy the populous portions; it supplements the efforts of physicians in giving gratuitous service to the poor; it visits the poor in advance that they may not come upon the city for support; it creates abattoirs and laboratories for the analysis of articles of food or in its preparation; it inspects the markets, the back shops, the kitchens of the restaurants, etc. That which argues much for its activity, there are numbers of statistical bureaus. In 1881 the mortality of St. Petersburg had risen to 38.2 in 1,000; in 1884 it was only 34.4 to 1,000; it has since continued to decrease, and in 1889 it was only 27.2. In ten years it had, therefore, diminished 33.5 per cent. Such figures require no comment. Would that every district of Russia would take for its model its capital.—*L' Union Medical.*

MEDICAL CHEMISTRY.

A NEW SUBSTITUTE FOR MUSK.

Another claimant for favors as a cheap substitute for musk made its appearance in trade some weeks ago. It is manufactured in Germany, and appears in the form of a white, crystalline powder in needle-shaped crystals a few millimeters in length. It is called tonquinol. It is said to be suited both to soap and perfume manufacture, to remain impervious to the influence of light for a prolonged period, and to be easily soluble. An alcoholic solution of 1 to 50 may be diluted with water to any extent, and herein it differs from musk Baur. Tonquinol is said to be soluble in most of the usual solvents, including fats, oils, ether and chloroform. Its odor is not affected by boiling caustic potassa. The price is about 25 per cent. lower than that of musk Baur. —*Chem. and Drug.*

NEWS AND MISCELLANY.

THE VASOMOTOR NERVES OF THE RETINA

Doyou (*Arch. de Physiol.*, 3, iii, l, p. 13, 1891) finds that electrical stimulation of the sympathetic nerve or asphyxia causes dilatation of the retinal blood vessels. The same result occurs when the animal is asphyxiated after section of the sympathetic nerve, so that obviously, besides the sympathetic nerve, there is still some other channel by which the vasodilator impulses reach the retina. This is the fifth nerve. If in a dog the sympathetic nerve be divided, after waiting twelve days until the nerve fibres of the sympathetic are degenerated, then exposure and stimulation of the Gasserian ganglion within the cranium caused dilatation of the retinal vessels, and at the same time redness of the lips and gums.—*Brit. Med. Jour.*

A COURSE OF LECTURES ON DISEASES OF THE URINARY APPARATUS BY DR. J. W. S. GONLEY.

A course of lectures on Diseases of the Urinary apparatus is to be delivered by Dr.

J. W. S. Gonley at the Mott Memorial Hall, 64 Madison Ave., New York, beginning Tuesday, October 6, at 8.30 P. M. There will be one lecture every Tuesday night at the Mott Hall, and one clinic at Bellevue Hospital every Saturday at 3 P. M. The lectures and clinics are free to the profession and to students of medicine.

MENSTRUATION IN THE MALE.

Paul Albrecht (*L'Anomale*, 1890, Ill.,) draws attention to the fact that white blood corpuscles appear in the urine of men at regular intervals, are present three or four days, and then disappear. This he interprets as a kind of menstruation. The idea is not a very strange one, for it is a known fact that men with excessive hypospadias menstruate. He offers this as another proof of the independence of menstruation and ovulation. It is to be hoped that further investigation will afford a clearer exposition of the subject.

VACCINATION.

Before the vaccination by Jenner was adopted, smallpox was one of the most formidable scourges of the human race, causing a mortality of 10 per cent. Since its general adoption it is less than 1 per cent. During the prevalence of smallpox in Prussia, from 1857 to 1861, nearly eight thousand among the civil population died. The mortality in the army, where vaccination was rigidly enforced, was practically *nil.*

During the period of thirty years just before the introduction of vaccine in the province of Trieste, the deaths from smallpox alone were 14,000 per 1,000,000 of inhabitants, and only 182 during the period of two years which followed the practice of vaccination.—*Weekly Medical Review.*

A DIAGNOSIS.

A writer in the *Western Medical Reporter* facetiously writes: Nature with a lavish hand has endowed the human body with no less than s'teen million of spots to which an ache or pain can be attached. When each one of these spots, both inside and out, is filled with a hard platinum tipped pain; when your head aches so that you are conscious of all the ruffles and scallops on your brain just as you see them in the pictures in your physiology; when your heart thumps and your stomach wobbles and you have the feeling that something is wallowing through your inside works; when your sternum feels stove-in and there is an uneasiness under your shoulder blades as though your wings were beginning to sprout; when you are one moment alive to the finger tips with thinking of the things you must get up and do and the next completely exhausted by even the thought of doing them; when your back-bone has the sensation of being twisted by a monkey-wrench; when you are so dizzy that you can't see, and your ears ring and eyes water and your nose is in such a state that it is presumption to lay aside your handkerchief for one short minute; when you cough and sneeze and groan in turn—in fine, when you feel like the very deuce—you can set it down that you have the grip.

EXPENSIVE DRUGS.

The following price-list, copied from Vol. II, page 56, of the *Diary of a War Clerk* (Lippincott & Company), will tell some of the many disadvantages under which the Army Medical Department of the Confederate States of America labored during the Civil War:

Quinine, . . .	$100.00	an ounce.
Calomel, . . .	20.00	"
Blue Pill, . . .	20.00	"
Opium, . . .	100.00	"
S. N. Bismuth, . .	100.00	a pound.
Bicarbonate of Soda,	5.00	"
Bichlorate of Soda, .	14.00	"
Ol. Bergami, . .	100.00	"
Cupri Sulph, . .	10.00	"

CONTRACT-PRACTICE IN BERLIN.

The Berlin correspondent of the *Therapeutic Gazette*, July, 1891, gives some racy news from the immaculate German capital. One part of this letter possesses a special interest for the physicians of New Orleans. The correspondent describes the evils of contract-practice as it exists there, and which he dominates "society practice"—precisely what it is called in New Orleans. Our physicians may find some consolation in reading the correspondent's remarks, and if they do find it they are welcome to it. He says:

"The Berlin physicians are just now greatly agitated by the question of 'Krankenkassenaerzte' (physicians of sick-benefit societies). Hitherto a member of such a society was compelled to consult the doctor of the society, who received a yearly salary for his services. As all Berlin workingmen and working women are legally compelled

to belong to a sick-benefit society, the work of doctors elected by such societies is naturally an enormous one. Their houses are actually besieged by patients, while hundreds of other physicians have no patients at all. The consultations which the "society doctors," as I will call them, grant to each patient are ridiculously short and absolutely incapable of benefiting the patients. I have heard of doctors "doing" over one hundred patients a day, and also have heard the number of minutes allotted to various consultations:

Minor surgical cases, . .	15 minutes.
Gonorrhœal affections, .	10 "
Headache and other pains, .	5 "
Influenza, ...	6 "
Rheumatism, . . .	6 "
Examination of the lungs, .	5 " etc.

It is evident that this state of affairs is an improper one and equally undesirable for both patients and doctors. To enhance the morbid character of the affair, the compensation of the physicians is a ridicuously low figure, viz: *eight Phennige* (two cents) per consultation, on an average. This figure is no fancy of your correspondent's brain, but has been officially fixed by statistical investigations and has been published broadcast in all papers. Imagine the blissful state of the practitioner rewarded by two cents for an auscultation of the chest. At last the Berlin doctors have waked up and taken energetic steps toward extinction of this shameful condition."

THE CHINESE CEMENT SCHIO LIAO.

The Chinese manufacture under the name of Schio-liao an excellent cement capable of joining broken porcelain, glass goods, stoneware, marble, etc. The proportions and ingredients are as follows: Lime reduced to a fine powder 54 parts, alum 6 parts, fresh blood 40 parts. The materials are vigorously worked up together into a mass of a homogeneous consistency. When diluted it may be used for saturating cardboard and objects made of paper, the result being that they become as hard as wood. The Chinese also use this cement in a dilute form as a protective varnish for the walls of their houses, and also for varnishing the interior surface of those vessels in which they carry oil and other fatty matters.—*Pottery and Glassware Rep.*

ALCOHOL IN PATENT MEDICINES.

A drink of whiskey is resorted to by the toper to "make him feel better." Alcohol seems to produce a temporary elation which many makers of patent medicines take advantage of. If a dose of the medicine seems to affect the patient at once, the presumption is that he will go on taking the remedy. Besides this, if the alcohol habit is once formed it will be hard work to discontinue taking the medicine just as it is hard to stop drinking whiskey when the habit is once formed. Look out for a majority of the "bitters"—they are simply disguised alcohol.

In the report on nostrums, proprietary medicines and new drugs, which was read before the American Association for the Cure of Inebriates, is found in the appendix the following list of the results of the analyses of a large number of well-known patent medicines. Some of the more popular ones contain alcohol as follows:

	Per cent. of Alcohol
Dr. Buckland's Scotch Oats Essence, (Also 1–4 gr. morphine to the ounce.) A more insidious and dangerous fraud can scarcely be imagined, especially when administered as this is recommended, for the cure of inebriety or the opium habit.	35
The "Best" Tonic,	7.65
Carter's Physical Extract,	22
Hop Tonic,	7
Howe's Arabian Tonic. "Not a rum drink."	13.2
Jackson's Golden Seal Tonic,	19.6
Leibig Co's. Coca Beef Tonic,	23.2
Schenck's Seaweed Tonic, "Distilled from seaweed after the same manner as Jamaica spirit is from sugar cane. It is therefore entirely harmless, and free from the injurious properties of corn and rye whiskey."	19.5
Atwood's Quinine Tonic Bitters,	29.2
L. F. Atwood's Jaundice Bitters,	22.3
Moses Atwood's Jaundice Bitters,	17.1
Brown's Iron Bitters, "Perfectly harmless. Not a substitute for whiskey."	19.7
Burdock Blood Bitters,	25.2
Carter's Scotch Bitters,	17.6
Drake's Plantation Bitters,	33.2
Flint's Quaker Bitters,	21.4
Goodhue's Bitters,	16.1
Hartshorn's Bitters,	22.2
Hoofland's German Bitters, "Entirely vegetable and free from alcoholic stimulant."	25.6
Hop Bitters,	12
Hostetter's Stomach Bitters,	44.3

Kaufmann's Sulphur Bitters, 20.5
"Contains no alcohol." (In fact it contains no sulphur, but 20.5 per cent. alcohol.)
Liverpool's Mexican Tonic Bitters, 22.4
Pierce's Indian Restorative Bitters, 6.1
Rush's Bitters, 35
Dr. Richardson's Concentrated Sherry Wine Bitters, 48.5
"Three times daily or when there is a sensation of weakness of uneasiness at the stomach."
Walker's Vinegar Bitters, 6.1
"Free from all alcoholic stimulants. Contains no spirit."
Warner's Safe Tonic Bitters, 35.7
Warren's Bilious Bitters, 21.5
Faith Whitcomb's Nerve Bitters, 20.3
—*Healthy Home.*

GYNÆCOLOGY IN SPAIN.

Gynæcology is at present occupying the medical world of Madrid, and in accordance with the grandeur that is inseparable from Spanish monarchy, the attempt to found a suitable institution for the teaching of midwifery and diseases of women in Spain is being made on a most elaborate scale.

The last number of *El Siglo Medico* gives the scheme of the intended institution. From the report I learn that the course of study in the new institution is to be extensive and thorough. Three years' study will be required for the license. The studies appointed are:—

1. The anatomy of the female, with special reference to midwifery and diseases of woman.
2. Embryology and histology.
3. Physiology, especially in its relation to the female.
4. Hygiene.
5. Midwifery.
6. Diseases of women.
7. Female surgery.

The practical instruction is to include:—

1. Obstetric clinics.
2. Gynæcological clinics, and
3. Instruction in the use of instruments and so forth.

During the first year the students are required to study anatomy, embryology, histology, and attend laboratory instruction for the first session; in the second session of the year, physiology and hygiene are added.

The second year is devoted to practical midwifery, gynæcology and pathology, and surgery of the female.

The third year is devoted to clinical teaching.

Everything that forethought and an intimate knowledge of the requirements of the profession demand is being done to place Spanish gynæcological medicine in the front rank. All will wish the undertaking success. We cannot forget that in the past, Spain promoted science; Roger Bacon drew his inspiration from the Peninsula, the Spaniard Bonetus introduced in modern times the oral instruction of deaf mutes, Servetus foreshadowed Harvey in the discovery of the blood, and it was a Spanish monarch who honored Vesalius, the father of anatomy. The country of Cervantes, Lopez de Vega, and Calderon, is capable of much good work. The conquest of the Western Hemisphere, the expulsion of the Moors, the legacy begotten of Charles V in the German Empire, the family feuds of the Bourbons, all diverted the Spanish from science, but a happier epoch commenced with Alphonso's birth, and everything points to the "victories of peace" that will elevate Spain to its rightful place among civilized nations.—*Medical Press.*

THE IDENTITY OF PUS COCCI AND ERYSIPELAS COCCI.

At the meeting of the Medical Society of Hamburg, of June 9th, E. Fraenkel demonstrated the cocci of pus procured from inoculation with the cocci of erysipelas. He had already procured a true erysipelas in the ear of a rabbit by inoculation with pure cultivation of the streptococcus, and now he had succeeded with the converse experiment of producing the streptococcus from inoculation with the cocci of erysipelas. Clinical observation confirmed what he had stated. Abscesses containing streptococci were often met with in patients suffering from erysipelas. In a case of secondary facial erysipelas, a point of exit was found in a whitlow under the nail which contains streptococci. In another case a primary erysipelas of the face was followed by a phlegmon of the breast and the mediastinum, as well as by pleurisy. Streptococci were found in all these cases. For the sake of experiment he inoculated pure cultivations of the erysipelas coccus upon the peritoneum of mice, and on the ear of rabbits. In the first case peritonitis was set up and in the other abscess of the ear. In both cases examination revealed the streptococcus as usually met with in abscesses.

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CLINICAL LECTURE.

ASTHMA.

BY JAMES M. ANDERS, M. D.,

PROFESSOR OF THEORY AND PRACTICE OF MEDICINE, CLINICAL MEDICINE, AND HYGIENE AT THE MEDICO-CHIRURGICAL COLLEGE, OF PHILADELPHIA.

We have before us to-day A. B., 17 years of age, the son of a farmer. Since four years of age he has had attacks of dyspnœa, at first supposed to be croupous. He now has rest from the attacks for a week at a time. They usually occur at intervals of about a week or ten days. One way he gets rest, namely, by leaning forward over the back of a chair. Family history is almost negative. A sister had convulsions commencing with teething and continuing through life. His attacks came on in the morning, between two and three o'clock. In all patients, similar attacks usually come on after midnight, and may be preceded by itching of the skin; by a sense of constriction in the throat. Sometimes, in this patient's case, the attack lasts only until morning; sometimes all the next day, and the patient feels as if his windpipe was stopped up. He wheezes, especially when the breath is being blown out. When the attack is passing off, he spits up mucus. The patient thinks a "cold" brings on such attacks.

The symptoms given point to asthma. Asthma may be symptomatic; it may be a disease *per se;* it may be secondary to emphysema; secondary to brain troubles and to heart disease.

On examination, vocal fremitus is normal. On inspection, there is epigastric impulse. This is probably due to hypertrophy of the right ventricle. On percussion, resonance is normal in all parts, while auscultation reveals nothing abnormal. If examined during an attack, the lower part of the chest would be seen to be depressed at each inspiration; his hands would be found grasping the knees in order to aid respiration; vocal fremitus would be normal unless some of the tubes were entirely occluded in local patches, and when this does occur it is generally at the back.

The physical signs to guide one, however, are those obtained by percussion and auscultation. During an attack there would be exaggerated percussion resonance, because of the contraction of the smaller bronchioles preventing free exit of air. On auscultation, we get all kinds of râles, whistling, snoring, cooing, etc. Being all made in a dry stage, they would be classed as sibilant or sonorous râles. Sibilant râles show that the caliber of the smaller tubes is much diminished. When the attack is about to break up, the sounds become more moist and we get subcrepitant râles. In the larger tubes we may get mucous râles. The subcrepitant râles are heard both on inspiration and expiration. When the attack breaks up the air seems sometimes to pass suddenly with perfect freedom to all parts of the lungs. Sometimes an attack passing off, stays away for weeks, or even months. It may come back without any apparent cause. Sometimes the patients know the cause, which may be that they have eaten something indigestible or have taken cold.

The predisposing causes of asthma are summed up in one word: heredity. Asthma is closely allied to emphysema, which is also hereditary. The disease is apt to skip one generation. We are apt to find in the family a history of convulsions also. Frequently, where there are cases of asthma in a family, you also have cases of rheumatism; well marked gouty, or rheumatic diathesis. It may not, however, be in the same generation in which the attacks of asthma occur. In this young man's family there is no history of gout nor of rheumatism, but of convulsions, you will recall.

The exciting causes are powders or dusts

of various sorts in the atmosphere (some people who live in the country and are affected may move to a city where the atmosphere is smoky, and be entirely relieved). One exciting cause is the influence of a well-marked "cold," as in this case. Any irritation of the nerves of the nose, of the stomach, of distant organs, may cause asthma by reflex action on the nerves of the bronchial mucous membrane.

The prognosis should always be guarded. When the attacks occur in the young, are not severe, with long intervals between and where there are no complications, the prognosis may be favorable. When the attacks come on at middle age, where they are severe and especially where they have led to secondary affections, such as emphysema, the prognosis is unfavorable as to recovery; favorable as to life.

Asthma is not a disease of old age. Before ten years, more cases occur than in any other decade. The reason it is seen in the old so frequently is because those who develop the disease while young, carry it through life with them.

The treatment must be directed to breaking up the attack and to prevention of a recurrence during the interval.

During the attack if it be severe, the remedy must be heroic. Not, however, in the old. In the young adult, in very severe cases, give morphine, not more than ¼ grain doses hypodermically. It is not generally necessary to repeat the dose. If morphine will not succeed or is contraindicated, chloroform may be given by inhalation. It should be given until the attack shows signs of breaking up, when a return of the attack should be awaited before again using it. It may be necessary to carry the chloroform to the point of insensibility. This does no harm but should not be carried beyond that point. Another remedy is tincture of lobelia, which may be given in 5 or 10 minim doses every half hour until the attack is broken up. Some cases will not stand lobelia. The lobelia should be stopped as soon as the attack is over. Smoking of stramonium leaves saturated with a solution of nitrate of potasssium, then dried, is a valuable remedy. Nitrate of potassium may be tried alone. It is prepared by taking a piece of bibulous paper, soaking it in a saturated solution of the potassium nitrate and allowing it to dry. This is then burned so that the smoke may be inhaled. The effect of this remedy is not understood; it may be due to the smoke; it may be due to chemical substances formed in he combustion. Chloral may be used, and may be given in a single dose of 30 grains. If no relief follows, 30 grains more may be given, but you should not go beyond this. Bromide of potassium does good, but is too slow to use during the attack. It may be used, with other remedies, during the interval, and gives beneficial results. It is said that when everything else fails, alcoholic stimulation is sometimes found to be of use. It is best given in the form of hot toddy.

To prevent the recurrence of the attacks, first remove the known causes. Then attend to the food, clothing, exercise. Woolens should be worn next the skin and moderate but persistent exercise in the open air, should be taken. Patients who suffer from asthma should take light suppers, as overloaded conditions of the stomach certainly have a tendency to bring on severe attacks.

To control the passive congestion which occurs during an attack and some time after, iodide of potassium or syrup of hydriodic acid should be given. The use of either of these remedies must be persisted in; the effect is always gradual. Along with the iodide of potassium in these cases, we give arsenic as follows:

℞ Potassii iodidi..... gr. v.
Liq. potassii arsenitis..... m. v.

after meals, in water. When the patient cannot take the iodide, give syrup of hydriodic acid. Arsenic feeds the blood and stimulates the respiratory centers.

As a word of caution, let me tell you never to advise the patient to use chloroform himself. We shall tell this patient to use tincture of lobelia, five minims every half hour, until the attack is broken up; besides, we shall give regularly the prescription containing the iodide of potassium and Fowler's solution.

There are remaining a few minutes, which it might be well to develop to the differential diagnosis of asthma. The most frequent conditions with which it is confounded, are acute or chronic bronchitis. Bronchitis frequently causes a certain degree of shortness of breath, especially when associated with heart affections. However, the dyspnœa of bronchitis does not come on nor go off so suddenly as that of asthma, nor do we have the absence of respiratory murmur during the attack, and abundance of expectoration at the end of it.

Asthma is frequently associated with emphysema. These two affections are each cause or effect of the other at different times. The history sometimes tells us which is the primary affection. When attacks of asthma show

the absence of symptoms and physical signs between the seizures, it is indicative of the absence of emphysema. This was the case in the patient before us. In emphysema, the dyspnœa is permanent, the chest is permanently enlarged.

Another disease sometimes mistaken for asthma is a spasmodic contraction of the diaphragm, occurring usually in hysterical women. In this disease there is the same form of inspiration but there is not the same violent effort at expiration. In hysterical cases there is inspiration after which the breath is held, and then the expiratory movement is easy.

In membranous croup the breathing at first seems like a bad attack of asthma. In croup, however, the dyspnœa attends inspiration, not expiration; indeed in all diseases which affect this part of the organism, that is the larnyx and trachea, the dyspnœa occurs on inspiration.

Another disease mistaken for asthma, is intercostal neuralgia. In this disease, there is tenderness at the point where the nerve emerges; the breathing would not be similar to asthma on expiration. There would not be the pain in asthma, which is present in intercostal neuralgia. In intercostal neuralgia the seat of tenderness is either near the spine, in the back, or near the sternum, in front.

COMMUNICATIONS.

SUCCESSFUL OPERATION IN FRACTURED AND DISLOCATED VERTEBRÆ.

BY H. A. BOYLE, M. D.,

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On May 8, S. M., aged 20 years, was admitted to the State Hospital at Ashland, suffering with an injury to the spine which he encountered by being struck by a passing train at St. Clair. He was under considerable shock and had complete loss of motion and sensation from the hips down. From the deformity and symptoms a diagnosis of backward dislocation with or without fracture of the 10th, 11th and 12th dorsal vertebræ was made. Attempts at reduction by extension and pressure were without avail, and an operation was suggested to the patient, which he refused. There was slight priapism, but no paralysis of the sphincter. For the first week after the injury catheterization was necessary, but after that he was able to void his urine. Once the urine was bloody, but frequent use of the catheter kept the bladder in good condition. He had continual, severe ataxic pains from the knees down, more marked in the left leg, with hyperæsthesia in both legs. Stubborn constipation was always present, which was controlled by enemata. Temperature was never more than one degree from the normal, usually a little below. Much care was necessary to prevent bed sores. He was put on a mixture of Tr. Nucis Vomicæ and Fl. Ext. Ergot, of each ℥ss. 20 drops 4 times daily. Nocturnal emissions were very common. His appetite was always poor, but the stomach never irritable. He gradually sank, until on July 12, he consented to an operation, when Dr. Biddle, assisted by the hospital staff and Dr. Brady, of Scranton, cut down on the spinal column, and found a sharp dislocation between the 9th and 10th dorsal vertebræ backward and between the last dorsal and first lumbar forward. The bodies of the three vertebræ being so far backward as nearly to occlude the canal and producing great pressure on the cord or the two sites of dislocation. The cord was also stretched from the normal position. An incision 8 inches long to the left of the spinous processes was made. All of the bony canal down to the bodies of the three dislocated vertebræ was removed and the posterior part of the bodies was chipped off and shaped up to relieve the cord, thus leaving that part of the cord in this situation entirely without any bony covering posteriorly. Spiculæ of bone were removed and the wound made thoroughly aseptic by the use of bichloride solution 1 to 1,000. In shaping out the bodies the cord was lifted out of place with a retractor. Continued suture of ordinary black silk was used, and a drainage tube inserted. He was under ether about 30 minutes and stood the operation well. Primary union took place with no bad symptoms. On the second day after the operation he showed slight signs of motion in the toes, this movement being barely perceptible. Sensation also was faintly noticed. Since that time the ataxic pains have ceased, he now has good sensation and motion, and can stand up and walk with the aid of parallel bars. He sleeps and eats well, is cheerful and has gained much flesh. The history of this case seems to point out that in many cases of fractured and dislocated vertebræ with much pressure, immediate operation might do much good, and that

many patients with "broken back" who otherwise would go on gradually but surely to death, might be saved by such procedure.

OPERATIVE TREATMENT FOR RUPTURED PERINEUM. *

BY DR. E. E. RICHARDS,

OF NORRISTOWN, PA.

This injury to the perineum is of such frequency that the operation for its repair is the commonest and best known plastic procedure.

The inconvenience of ruptured perineum scarcely needs any explanation. We have following it, loss of functions of the sphincter ani muscle, rectocele, cystocele, prolapsus and procadentia uteri, and a train of nervous symptoms whose name is legion.

Believing that "an ounce of prevention is worth a pound of cure" in this matter especially, let us consider the causes which lead to this accident, and the best means of averting it.

The most frequent predisposing causes are a small inferior strait, a long and rigid perineum, all malpresentations as podalic, occipito-posterior varieties, broad shoulders, any degeneration as cicatricial tissue, either sudden or protracted expulsion of the child, and the use of forceps before natural dilatation has been effected.

For the prevention of tears, we can resort to gradual dilatation controlling uterine contractions, emptying the rectum to prevent tenesmus; by having the patient assume the lateral position and thus modifying the contractions by support of, and forward pressure of the head, by enucleation of the head, and the use of an anæsthetic, as ether, to bring about relaxation of the parts and preventing tenesmus.

With a rigid and unyielding perineum, lateral incisions are preferable to a laceration.

The sign of danger is the white triangular glistening mark along the perineum, and the incision should be made on the lateral margin at a point corresponding with the tuberosity of the ischium, the incision being made with a probe pointed bistoury, turning the edge out, and cutting for a distance of 1 c. m., during a contraction. If the perineum is still white an incision should be made on the opposite side. With all of these precautions carefully observed, we may have a ruptured perineum. When a rupture is discovered after labor it should be sewed up at once. This condition is frequently apparent to the patient when the physician has been known to stubbornly deny its existence, the patient complaining of a smarting and burning sensation over the torn surface upon voiding urine. In this enlightened day and generation there is nothing to justify neglect in the immediate repair of laceration of the perineum, even less the stupidity of the physician who fails to recognize such a condition.

The best procedure is the primary operation, especially when the sphincter ani is not much involved. The contra-indications being exhaustion due to hæmorrhage, and a long and difficult labor.

The torn parts still fresh and bleeding are brought in apposition by means of sutures. Union is sometimes consumated by keeping the parts together without suture, by bandaging the limbs together and observing cleanliness—but this method is not to be relied upon—sutures can sometimes be introduced without the use of ether.

When labor is more than 24 hours over, the primary operation is useless, and a secondary operation must be resorted to, in which case it is always necessary to etherize. The vulvæ should be allowed to return to their normal condition, all congestions and contusions being allowed to disappear before an operation is attempted.

There are certain preliminaries which it is the duty of every operator to observe, in order, not only to promote the healing of the wound, but also to insure the formation of a strong cicatrix. To this end the general health should receive proper attention. Careful attention must be given to the relief of symptoms of hæmorrhoids, or vaginal and uterine discharges. Internal piles are a frequent complication of ruptured perineum in consequence of the injury to the sphincter ani. Some of the most distressing subjective symptoms of piles will be absent; but the hæmorrhoidal swelling will cause great inconvenience to the operator, and they always imply a more or less unhealthy state of the surrounding mucous membrane. Discharges from the genital tract may prove very prejudicial to the healing process. Where they occur they must be corrected before any operation is attempted, as their presence upon the denuded surfaces will retard the healing process. Hot water injections, pledgets of cotton soaked in glycerine, with the addition of boracic acid or of glycerite of tannin, applied to the cervix will generally

* Read before the Montgomery County Medical Society, July 22, 1891.

do much good. Where the lacerations have been of long standing, frequently the general health is seriously impaired, and operative measures would be almost useless, unless tonic treatment has restored, in some measure at least, the general health. Among operators, opinions differ considerably as to the details of the operation, some preferring one kind of suture and some another, and also as to the best kind of after treatment, but all are guided by one principle, the necessity of sewing up the parts so as to secure the best possible union.

Two forms of rupture present themselves for our consideration, partial and complete.

In partial rupture the laceration involves the tissues down to or partly through the sphincter ani muscle. Complete larceration extends through to the anus and involves more or less of the recto-vaginal septum and wall of the rectum. In rare instances the laceration is central, extending from the inferior vaginal wall to some point in the perineum, the fourchette and sphincter ani remaining intact.

The indications are to restore as near as possible the normal relations of the separated tissues.

In operation for partial rupture, for a week previous, the patient should be prepared by emptying the alimentary canal by proper purgatives, and this can be secured by the administration of Hunyadi Water, before breakfast, or the Fld. Ext. Cascara sagrada ♏. x–xxx three times daily—or any other suitable purgative.

The patient should be placed largely upon a liquid diet during the last three days preceding, and an enema should always be administered shortly before the operation. The purgative must not be given with such frequency as to produce diarrhœa and thus cause serious inconvenience during the operation.

The instruments required are a Tenaculum, and good tissue forceps, a pair of scissors curved on the flat, strong needle holder and strong needles, half curved near the point and without cutting edges, silver wire and Chinese silk, and catgut sutures, for deep and superficial stitches, and antiseptic sponges.

The patient should be placed in the lithotomy position immediately after she is under the influence of an anæsthetic, the legs to be supported by two assistants, or what is infinitely better, a Clover's crutch, if it can be had. The vagina, vulva and anal region should be irrigated with a solution of corrosive sublimate 1–3000.

The glistening smooth surface of the cicatrix will determine the full extent of the laceration.

The denudation should extend upward along the labium of either side, and well up into the depression or angle where the floor of the vagina and labia come together. Upon the floor of the vagina the freshening should extend backward to the crest of the rectocele, the elevation formed by the bulging forward of the vagina.

Denudation of the vaginal walls can be most rapidly accomplished by inserting the finger into the rectum, thus making the surface to be freshened tense and elevated.

The first suture is introduced near the sphincter ani, the sutures to be inserted about ¼ inch apart, the needle entering the same distance from the edge of the wound and carried through from the patient's left to right side. The finger should be kept in the rectum, to prevent the needle from penetrating into the rectum, and to guide it safely through the recto-vaginal septum. A supporting suture, the last of all, can be inserted at the upper limit of the freshened surfaces, passing through the labia and coming out in the cavity of the vagina.

The ends of the wire of each suture, should be loosely twisted to prevent being pulled out by accident. When all the sutures have been introduced the wound should be cleansed and disinfected with a bichloride solution, and the wire twisted, commencing with the lowest. The twisted ends can be secured by perforated shot, or the ends can be gathered together and covered by a piece of soft rubber tubing.

The patient's thighs should be bandaged together, and she to be placed on her back, and the catheter introduced every 5–7 hours. The bowels should be confined for 4 or 5 days, and at the expiration of that time a warm water enema should be given to secure a liquid discharge, the sutures to be removed in 8–10 days. Abduction of the thighs should not be permitted until the 14th day.

In the secondary operation for complete laceration of the perineum, the preparatory treatment for partial rupture should be rigidly enforced. The chief objects of this operation are to restore the functions of the sphincter muscle, and restore the perineal body.

The freshening should extend along the triangular cicatricial surface of each half of the divided perineum, and along the entire edge of the rent into the recto-vaginal septum. For the first suture the needle is

introduced just at the margin of the anus, and ¼ inch from the denuded surface. It is directed through the recto-vaginal septum to the angle of the rent and back along the opposite side at a point corresponding to the insertion. In this instance also, great caution must be observed that the needle does not enter the rectum. A second suture is passed parallel with this, the remaining sutures being inserted as in the operation for incomplete rupture.

(In a case upon which I recently operated I introduced a double drawing-string stitch of strong catgut along the denuded anterior margin of the obliterated sphincter ani, in which good union resulted, and the securing of an efficient sphincter ani.)

The bowels should be confined for 7–9 days, after the operation, and then opened with an enema which should *invariably* be administered by the physician.

In removing the stitches the anus stitches should remain in until the bowels have been evacuated so as to preserve the freshly united structures.

As complete union in this condition is very difficult of accomplishment the operator need not feel disappointed if a second or third operation should be found necessary.

I have been interested in the marked nervous symptoms which have developed in some cases that have recently come under my observation following operative measures.

Sleeplessness, fear of impending evil, loss of memory, a feeling of horror that they may be becoming insane, and such symptoms as might make one fear serious mental derangement.

I am not prepared to advance any theory as to the cause or combination of causes which may give rise to these symptoms, and should be pleased to hear from those members of the profession who have had similar experiences as to their views in this matter.

SUPPURATIVE INFLAMMATION IN UNDETECTED FRACTURE.*

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SHERMAN, TEXAS.

Simple fractures, both complete and incomplete, in the long bones, more especially those of the arm and forearm, which were not recognized at the time of injury, are not extremely rare occurrences, as I doubt not the results of such cases that do not make an early recovery come under the observation of most practitioners.

I am inclined to think that a majority of these cases occur in children, in which the fracture is not complete and the ends never become much displaced.

There may be complete simple fractures of the humerus, of one of the bones of the arm, or of one of those of the leg, with but little displacement. These fractures may go on undetected, and recover with only a little soreness or tenderness at the site for a time, without a knowledge of the true nature and extent of the injury, or until symptoms arise calling attention to disease of the surrounding structures or of the bone itself, when the fracture may then be discovered.

They may not be recognized at the time of injury, because of so little displacement and the absence of easily detected crepitus; because of insufficient thoroughness in the examination on account of the pain and soreness thereby produced, or lack of expertness in the examiner; or there may be so much swelling when the case is seen and the displacement and other symptoms so much wanting, that, after careful examination, some cases will yet remain undetected. In incomplete fracture, as that so often occurring in children, the deformity may be so insignificant, and in the absence of crepitus, that it may escape detection in rare cases by the most expert surgeons.

If the patient is in moderate health and the degree of ordinary care exercised in the management of the injury, a large majority of these cases make good recoveries, and in many the fracture is never discovered; but there are other cases, whether from fault of the system, from carelessness in regard to the management of the injury, or sometimes from gross neglect, a subsequent accident or some other unknown cause, that have unpleasant and sometimes serious results.

We are sometimes invited to examine a patient for some trouble of the leg, arm, or forearm, and find a more or less local swelling, acute or dull aching pain, tenderness and throbbing; the swelling may be hard or soft, and fluctuating; there may or may not be marked constitutional disturbance. If pus has formed—and usually it has—there will in a majority of cases be fever, etc. Upon inquiry we will be able to elicit the history of an injury sometime previous; this injury may or may not have received surgical attention, but after a day or two of pain

* Read before the North Texas Medical Association, June, 1891.

and soreness—which may then subside—and there seems to be no further trouble except weakness and an indisposition to use the limb. Very soon, however, the point of injury will become more tender, there will be a little swelling, and this will increase each day until fever appears, the pain and soreness increase, the constitutional disturbance may be considerable, and rigors with perspiration announce the advent of suppuration.

Roswell Park, in a recent and most instructive and interesting lecture on surgical pathology, delivered at the College of Physicians, of Philadelphia, declared that "we are prepared to make the brief and explicit statement that, clinically, at least, we have no suppuration except such as is produced by bacteria; in other words, that pus is a product of parasitic origin." And Senn, in his new work, *Principles of Surgery,* states that "the brilliant results which have been obtained by the antiseptic treatment of wounds make it exceedingly probable that all wound-infective diseases are caused by living micro-organisms," and again in the same chapter "it requires no longer any arguments to show at this time that all inflammatory wound complications—among them suppuration—are without exception caused by the introduction into the tissues of specific pathogenic microbes." He also states that "an abscess which develops in tissues debilitated by a contusion or some antecedent lesion usually reaches greater dimensions than if it occur in otherwise healthy tissues," and then we find Holmes making the following statement: "the inflammation is evidently infective, for it has a tendency to spread not only along the periosteum, but through the connective tissue of the Haversian canals to the medulla, which is often seen in these cases to be in a condition of diffused suppuration." Therefore, it cannot be doubted now that the weight of authority ascribes all suppurative inflammation to living microbes, and while they exist in the part the disease is liable to and generally does spread.

In these cases of suppurative inflammation following a fracture that has not been detected, it is usually difficult to find out just where the nidus of infection was established and the point where the inflammation began, whether in cellular tissue, a diseased blood-vessel, periosteum, or the fractured end of the bone proper. It may be that at the point of fracture, by some slight movement of the ends, a loose spicula of bone or contusion of tissue irritates the parts and thus lights up the trouble. In fracture, even though it be partial and the displacement be ever so slight, there is a localized disturbance of tissue function; there may be slight hæmorrhage, and though it may be slight and quickly arrested, there follows blood stasis, dilatation of the capillaries, nutrition is arrested, infiltration and inflammation ensues, and the parts are favorable for the action of pathogenic micro-organisms. It probably begins most frequently in the cellular tissue and extends to the surrounding parts, or it may begin as a periostitis and extend to the bone, destroying its structure and the surrounding tissues as well, and, indeed, may result in that dread disease osteo-myelitis. The inflammation most frequently begins at a single point, but it does sometimes originate at two or more points simultaneously; in the latter case it spreads much more rapidly.

Sometimes extensive bone necrosis has taken place before the case has been observed, perhaps the entire bone may be involved and any other contiguous bones.

Suppurative inflammation following an undetected fracture is much more likely to occur in unhealthy subjects. Syphilis, tuberculosis, chronic malarial poisoning and a debilitated system favors the development of suppuration. Malarial toxæmia is especially prone to develop it when a bone has been wounded.

There may be a suppurating surface in some other part of the body and microbes entering the circulation of the blood or lymphatics find a lodgement at the seat of fracture where the tissues have been contused and become infiltrated, not able to resist the infective action and thus precipitate suppuration.

The diagnosis is not difficult for there are usually well marked symptoms of pus formation.

The general constitutional disturbance, fever, rigors, perspiration, coated tongue, probably constipated bowels, restlessness, frequent pulse, pain in the part, swelling, sometimes discoloration, tenderness and fluctuation all tell in unmistakable terms the doleful tale.

The condition of affairs with such a train of symptoms must not be mistaken; prompt recognition is all important and treatment should not be delayed. A limb and even a life may depend upon prompt and decisive action and this is all the more imperative if there should happen to be osteomyelitis, for here radical measures only will promise any favorable results.

The indications are generally clear. If we see the case before the formation of pus and symptoms point to a periostitis or deep

tissue infiltration, then in my judgment deep incision through the periosteum under an antiseptic and anæsthetic, and an antiseptic solution brought in contact with the exposed surface, full vent given to any pent up serum or blood, a drainage tube passed in and the parts covered with antiseptic gauze; if suppuration has already begun the incision should be made through the suppurating surface in such a way that its bottom can be reached, all pus washed out thoroughly, irrigated with a hot antiseptic solution and well packed with antiseptic gauze through which issues a drainage tube. All pus microbes should if possible be destroyed, the cavity washed out frequently and the surrounding parts kept in an aseptic condition. If dead bone be present it should be removed, scraped away with gouges and chisels, resection when indicated, if this is not effectual the entire bone may be taken away leaving the epiphysal ends if healthy and as much periosteum as possible. If the parts can be rid of all sources of infections, kept sweet and clean absolutely, it is surprising how rapidly the work of reparation proceeds and what good results are sometimes obtained in very unpromising cases; but I repeat the chief object is to be sure of getting rid of the pus microbes; everything else are but adjuncts and unless this be accomplished we will have many failures and some sad disasters. Then everything in the way of dressings, the hands, instruments, the parts, applications, water, &c., must all receive antiseptic treatment; in this bacteriological era this antisepsis must be thorough, nothing else will be acceptible, and the times demand it.

A little carbolized water, the hands washed with simple unboiled water, the ligatures saturated in a carbolized solution for a few moments, dirty sponges, unclean bandages and drainage tubes and all called antiseptic treatment in this day will not be tolerated. The surgeon who proceeds to dress a wound in such a way may be held personally responsible for any bad results and subject himself to the liability of a suit for malpractice.

Rest is necessary to both part and system in bad conditions, rest to the part for a time at least under all circumstances will be required. So much for the local treatment. Of no little importance is the addition of constitutional treatment and we must be guided in this by the conditions we find. If it be a strumous subject he will require special treatment for that diathesis, if a syphilitic or antisyphilitic treatment will be required to meet the demands. If suffering from malarial infection appropriate special measures for the disease must be had recourse to. In all cases no matter what the complication or if there be no complication, it will be found necessary to maintain the secretions in proper condition and by special diet and tonics to build up the general system and have the various organs perform their functions.

THE USE OF ATROPIA SULPHAS IN DISEASES OF THE EYE.

BY ARTHUR D. MANSFIELD, M. D.,

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If there be any class of drugs that is essential to the ophthalmologist it is that class of drugs known as mydriatics, and standing preëminent in the class is atropine, theactive principle of belladonna, given to us in the form of the sulphate, a salt readily soluble in definite proportions and to any extent.

Should the specialist in eye diseases be asked to surrender all but one drug, and retaining but one, continue the practice of treating affections of the eye, I think most certainly the drug retained, would be a solution of atropia, or should the value and worth of the mydriatic appeal to us in another way—having a very limited knowledge in diagnosing eye affections, and being unable to tell just what was the matter with an eye which should fall under our observation and care, and some doubt exist as to what should be done. I think a safe and sure rule to be observed would be to instil in such an eye, a solution of atropia.

The importance and value of the mydriatic in the treatment of eye diseases is incalculable. It would not perhaps be without interest to enumerate some of the uses of atropia.

In the use of atropia we see its manifold applications, in the first place its value in diagnosis is well known, if upon ophthalmoscopic examination the fundus appears cloudy, either from degeneration of the vitrous humor, or senile, or traumatic changes in the lens, or the cornea become opaque, the instillation of the atropia solution enlarges the pupillary orifice, and enables the ophthalmogist to obtain a better view of the fundus.

If again the pupil be contracted from

various causes, the use of a mydriatic is brought into requisition. Again, in cases where there exist posterior synechiæ with either partial or entire occlusion of the pupil denoting an old iritis, the use of the mydriatic is very valuable, or if the adhesions have been severed at the time of the iritis, the use of the mydriatic at a subsequent date *i.e.*, when the iritis has disappeared as far as outward signs are concerned will reveal the plastic exudations adherent to the anterior surface of the crystalline lens.

The mydriatic is useful again in diagnosing the extent of the development of senile cataracts. Should the use of atropia be taken from us as a diagnostic means, important as it is, yet we would suffer a greater loss in the want of a mydriatic as a curative agent to many of the graver affections which assail the eyes.

It is as a mechanical agent, perhaps more than any other property; for a mydriatic must be considered as a mechanical agent, that atropia finds its greatest use and marks its most brilliant results in eye work.

When we see a case of iritis the main indication as far as preservation of sight is concerned, is the removal of the iris from its apposition with the lens, thus preventing the adhesion of the two opposing surfaces and allowing the vessels to disgorge themselves and remove lymph and other plastic materials thrown out. In wounds of the cornea with escape of the aqueous humor, the iris and lens coming in contact with open wounds of the cornea subsequent adhesions perilous to future vision would follow, were not a mydriatic instilled, thus separating the parts while the parts could be divided. We see a valuable use of atropia in all cases of operations upon the iris where we wish to keep the iris from attaching itself to the lens.

Not to weary my readers, I will pass on, only mentioning a few of the remaining uses. Occasionally we see the importance of a mydriatic such as atropia in cases of hypermetropia with internal squint and more or less amblyopia in the crossed eye, in many cases the strabismus disappearing and emmetropia resulting in not a few cases. The use of a mydriatic in testing errors of refraction revealing latent astigmatism and hyperopia and other uses show the value of atropia to the eye specialist. But is atropia and its use restricted to specialists? By no means, else would I not write this article. The general practitioner depends upon the specialist as much as the specialist depends upon his fellow practitioner. There is no reason why the general practitioner should not do as much good, and sometimes more good, with atropia as the specialist can, I say the general practitioner can sometimes do more good with the judicious use of atropia than the specialist can. E. G., seeing a case of iritis, the early instillation of atropia sulphas in a solution, gr. iv, ʒj., will prevent adhesions that only a subsequent iridectomy can sever in many cases, and then only partial recovery of sight.

To bring my article quickly to an end I will speak briefly of its contra-indication. Atropia and mydriatics do good in most eye affections and perhaps the rule may be a good one to state that you can do no harm in using atropia, yet there is one condition in which the use of a mydriatic causes positive injury to the eye and rapid and hopeless impairment of vision, it is to this irreparable loss of sight and danger to the eye that I wish to caution any of my readers who may considers it necessary to pay heed.

In cases of glaucoma where the eye-ball is tenser and harder than usual, accompanied by pain (not always though,) and no apparent redness of the parts of the eye, a gradual contraction of the field of vision, pitting of the disc spectra of light about artificial lights, etc. In this condition mydriatics are contra-indicated and myotics, such as eserine, are clearly and positively indicated. With this one injunction upon the use of atropia, I recommend to the use of the general practitioner that valuable drug.

Society Reports.

SECOND TRIENNIAL MEETING OF THE CONGRESS OF AMERICAN PHYSICIANS AND SURGEONS, HELD AT WASHINGTON, SEPTEMBER 22, 23, 24, AND 25, 1891.

GENERAL SESSION, WEDNESDAY.

(*Continued from page* 538.)

The first paper read was on

THE LATE MANIFESTATIONS OF SYPHILIS,

by P. S. Conner, M. D., of Cincinnati, Ohio.

Dr. Conner said that more than any other disease, not excepting tuberculosis or cancer, syphilis is the common meeting ground of us all—physicians, surgeons, obstetricians, spe-

cialists, pathologists, sanitarians. Modified by transmission through a dozen generations, it is still a dreadful and dreaded ill. Were there only the early lesions, syphilis would take place among the minor ills, and this is the history in the large proportion of cases. Probably in three or four out of five of the acquired cases, the disease is short-lived and does but little damage. There is, however, no means of saying in any individual that in a few months or years the disease will be eliminated. Those syphilitic by inheritance suffer from late lesions in far greater ratio than the acquired cases.

There is no sharply defined line between the early and the late constitutional symptoms. Speaking generally, the late lesions are neo-formative, the early hardly ever so; so that the gumma is the sign and seal of the tertiaries. Further, they are not communicable. As a rule, they are quietly developed. No region or organ is exempt from invasion with resulting new growths. Of most frequent occurrence are the affections of the bones and of the nervous system. The lesion of the bone may be single or multiple. The symmetrical involvement of bones is exceptional. Liquefaction is rarely observed, and suppuration only an accident. As ordinarily seen at the present day, extensively destructive and deforming bone inflammations are almost confined to the head and the nasal regions. The reason of this is probably the exposed position of the bones, the thinness of some of them, the abundance of small vessels, and the intimate fusion of mucous membrane and periosteum. In the adult and acquired there is seldom difficulty in recognizing the specific character of the lesion.

Though a large proportion of chronic bone and joint disease in the child, the adolescent and the young adult is tubercular, yet the cases in which it is syphilitic are by no means few. This may be recognized by the location of the disease, by recognition of traces on the cornea, the teeth, and the skin, by application of the therapeutic test and, when practical, by inoculation.

The most frequent and the most dangerous lesions are those of the nervous system. Dr. Horsley, in speaking of cerebral gumma, declared that "medicinal treatment in no wise cures, and only very temporarily alleviates the trouble. . . . Excision offers the only chance for the patient." Is this the fact? Has not more than temporary alleviation followed the use of the iodides? However great the advances of brain surgery in the last few years, would not the outlook of the syphilitic be worse than it is, if only in the removal of the gumma could be found a chance of recovery? The affections of motion, sensation and intellection are frequent in the order given. The first at some time and in some degree is present in every case. Hysteria may mean syphilis. It is infrequent in men, while brain syphilis is rare in women. In brain syphilis, paralysis is more common than convulsions. Sensation frequently remains unaffected. Disturbances of intellection are almost necessarily associated with any brain lesions.

In certain cases, although rare, marked motor, sensory and intellectual disturbance occur suddenly and together. Ordinarily after sleep the patient is found in a state of stupor, from which it is possible to rouse him partially. The muscles are relaxed. The pulse rate is decidedly lessened, the breathing is slow, and the temperature is subnormal. Under mercurial treatment, promptly and persistently maintained for many months, relief even permanent may be expected and secured.

Spinal lesions are of infrequent occurrence. Exostoses of the spinal canal may occur and neoplasms develop. There may be pain and paralysis affecting different parts according to the location of the lesion. A question of much interest is the causative relation of syphilis to locomotor ataxia. That the majority of ataxics have had syphilis cannot be questioned. Tabes is certainly not of true gummatous origin. Nor can the sclerosis be regarded as the result of the diffused formation so often found in the cerebro-spinal axis. As in other parts of the body syphilitic treatment generally fails to cure or even to retard the evolution of symptoms.

There are many things about late syphilis that deserve careful study. What is the explanation of the long years of intermission with the after development of grave functional and organic disturbance? Where has the disease been lurking all these years?

What are the relations of syphilis to other diseases and to injuries? Pre-existing tubercular disease renders probable a more severe and often a more rapid syphilitic course. To the "strumous" individual the specific infection is more dangerous than it is to others. That specific lesions may become tuberculized has been proven, but only rarely does the tubercle bacillus find a nidus in and about a syphilitic new formation. Syphilis is not likely to be inoculated on a person suffering with cancer, and if it is there is no good reason why the two diseases should not each go on in its natural way. On the other hand, cancer may and not so

very rarely does attack an area in which there has long been specific thickening and induration, as in the chronic leucomata of the tongue. Once in a while a gumma undergoes cancerous degeneration, more often when situated in the tongue than elsewhere. The local affection, no longer amenable to specific treatment, goes on steadily from bad to worse. In certain localities, especially in the breast, a gumma may readily be mistaken for a cancer. If syphilitic growths do not become sarcomatous, they often resemble sarcomata, and many reported successful operations for the malignant affection has been really one in which a gumma has been removed.

As a rule, the wounds of syphilitics, when the disease is in a latent stage, heal as promptly as in other cases, although union may be delayed or even prevented until after the patient has been brought under the influence of the anti-specific remedies. This is less true of wounds of the soft parts than that of the hard parts, as fractures, where, at times, false joints will form in spite of the most judicious treatment. When the specific lesions are in the process of evolution, the chances of interference with proper repair are not few, and no operation should be done at this time which can be postponed. I deem, at any time before doing an operation, the success of which depends on primary union, it is well to keep the patient for several weeks under the influence of the iodides and mercurials. Very rarely does any wound become actually syphilitic. In one who has had the disease, although there have been no manifestations for years, any traumatism may be the starting point of extensive specific lesions.

In very many cases of aneurism, under forty years of age the lesion may be consequent on syphilis.

The mortality rate of acquired syphilis is rare. In its inherited form the disease is a very grave one. Four-fifths of the pregnancies terminate prematurely.

Dr. Abner Post, Boston, co-referee said: In speaking of syphilis he spoke from the standpoint of the clinician and student and not from that of the pathologist. He called especial attention to what is known as late hereditary syphilis. This relates to those who have inherited the disease and only after a lapse of years show symptoms corresponding to the tertiary symptoms of acquired syphilis. The later forms of acquired syphilis are not necessarily a part of the case. The so-called late lesions occur much earlier in the history of the disease than we are in the habit of thinking. After the third year the chances of a recurrence grow steadily less. As a preventive of late symptoms early treatment by mercurials must be ranked high but no method will allow us to promise a cure that is absolute immunity from subsequent attacks.

The different systems were taken up in order. Induration and enlargement of the lymphatic glands is one of the common symptoms of early syphilis. In late hereditary syphilis the part played by the lymphatics is great.

Cutaneous lesions are second in frequency to the lesions of the nervous system in late acquired disease.

Diseases of bones were next referred to. A difference between tuberculosis and syphilis lies in the preference for syphilis for the long bones and their shafts, while tuberculosis attacks by preference such bones as those of the wrist and ankle. Disease of the joints are at times undoubtedly the result of syphilis.

Reference was next made to intestinal and gastric symptoms in syphilis. It is fairly well established that very serious lesions of the gastro-intestinal tract may take place. As one of the possible causes of disease of the ileo-cœcal valve, syphilis must be given a certain amount of consideration.

In diseases of the nervous system there is a large field which lies practically unexplored in congenital syphilis.

An interesting question is, "How much influence should a negative history have in a doubtful case?" There are many cases in which the existence of syphilis is not known by the patient.

Every prognosis must be a matter of special consideration. It is the persistence of the damage and not the specific lesions that cause the persistence of the symptom. There is something to be deducted in the matter of treatment. Anti-syphilitic treatment has great power over the active process late lesions, but it is powerless to restore the tissue already destroyed. The attempt to destroy a syphilitic tertiary sore is in general futile. The late lesions of inherited syphilis are as readily controlled as those of acquired disease. The amount of iodides that may be administered is very large. In regard to the treatment as an aid in retrospective disease too much value must not be placed upon this element in doubtful cases, for mercurials and iodides do have some influence over tuberculosis.

The study of syphilitic phenomenon is a necessity of medical progress. The possi-

bility of syphilis renders uncertain the diagnosis of tuberculosis and cancer, and other malignant forms of disease. We need the most careful clinical studies; we need Hospitals specially devoted to syphilis; we need to make its study obligatory.

The subject was further discussed by Dr. Robert T. Edes, of Washington and Dr. James Nevins Hyde, of Chicago.

Adjourned.

THURSDAY.—DISCUSSION ON FIBROID PROCESSES [CHRONIC INTERSTITIAL INFLAMMATION SCLEROSES] THEIR PATHOLOGY AND ETIOLOGY WITH ESPECIAL REFERENCE TO THE INFLUENCE OF DIATHESIS AND HEREDITY.

The discussion was opened by Dr. A. L. Loomis, of New York.

Fibroid processes cannot be spoken of as degenerations for they imply an active process productive in character. There is always a higher than normal grade of activity in those elements which develop connective tissue. The only way in which fibroid tissue can develop is from growing cellular elements. He excluded from the list of the fibrosis all conditions of simple preponderance of fibroid tissue from the atrophy of other elements. Two forms of fibrosis were described at length, the hyperplastic and the inflammatory. The first is due to diminished nutritive supply to parenchymatous atrophy, to nuclear proliferation and to connective tissue hyperplasia. The inflammatory form is due to parenchymatous degeneration, to constitutional influences and to local attraction by the products of tissue change, positive chemotaxis.

All those agencies which diminish the vital forces by which the cell appropriates to itself its proper elements, tends to the production of fibrosis. These agencies may be mechanical, chemical or mental. Among the causes of fibroids may be mentioned direct stimulation of fibrous growth, all conditions including a limited degree of nutritive supply, all conditions and elements which induce perverted nutrition, either degeneration or necrosis including mechanical forces, perverted or defective nutritive supply, and all toxic and trophic influences.

The relation between diathesis and fibroid processes were next considered. A diathesis may manifest itself by any bodily function displaying an activity out of proportion to the stimulant applied. In the fibroid diathesis the growth of fibroid tissue is out of proportion to the amount of stimulation. Fibroid processes are not always injurious as is seen in cases of cured tuberculosis. In seventy cases of cured tuberculosis under the observation of the writer, fifty-four presented well marked evidences of fibrosis. Diathesis often determines the nature or prominent action which will follow any given irritant or stimulation, provided more than one is possible. It also modifies the ratio between the established process and its causes.

The speaker next referred at length to the special manifestation of the fibroid process in the arteries, heart, kidney and liver.

Dr. William Osler, of Baltimore, considered the fibroid process under the head of degenerative, inflammatory and developmental. The degenerative were subdivided into the atrophic, the secondary degenerations, the toxic forms as from lead, ergot, syphilis, the sclerosis associated with similar changes in the smaller arteries and capillaries. The degenerative form includes the greatest number.

The inflammatory form was subdivided, the secondary forms in consequence of reactive inflammation following hæmorrhage, tumors, foreign bodies, abscess and trauma, the scleroses which follow primary encephalitis or myelitis.

The following questions were suggested for consideration:

1. What is the relation of vascular change to the degenerative scleroses? How far histologically are they mesodermal or ectodermal, or are they mixed, containing both neurogliar and collacenous connective tissue.

2. The lobar scleroses of children. What is the nature of the primary affection? Is it inflammatory? An encephatilitis or meningencephalitis or is the essential lesion in the vessels.

3. Developmental. Can we recognize a purely ectodermal form?

Dr. Charles L. Dana, of New York, referred to the chronic fibroid processes of the spinal cord. He classed these into—first, primary degenerative; second, secondary degenerative; and third, reparative and inflammatory. The first includes locomotor ataxia, lateral scleroses, combined scleroses, progressive muscular atrophy and amyotrophic sclerosis. These scleroses are not inflammatory but due to the destruction primarily of cells and fibres. The causes of this degeneration were ether toxic substan-

ces or disturbance of nutritive equilibrium by infectious vascular strain or imperfect nutritive supply. They are not related to any special diathesis.

The secondary fibroid processes, so-called, have been shown by French pathologists to be probably in great extent neurogliar proliferations or gliosis, not a fibrosis.

The inflammatory scleroses, including chronic myelitis, diffused myelitis and transverse myelitis are mixed processes composed of a simple necrotic process, inflammatory processes and secondary degenerations.

Dr. William Councilman, Baltimore, referred to the fibroid process as found in the liver, giving the results of investigations made in the Johns Hopkins Hospital. He dwelt upon the fact that the first element in the fibroid process was a necrosis. The fibrosis is not the result of stimulation. The tendency to growth is always present and as soon as the opposition is removed it manifests itself.

The Congress then adjourned *sine die.*

Selected Formulæ.

FOR TENDER FEET.

Tramps, either amateur or professional, who suffer from sore feet after an unusually long walk, will experience great relief from soaking the feet once or twice a week in a half-pailful of hot water to which a piece of nitrate of potassium the size of a small walnut has been added.

PARSONS' LOCAL ANÆSTHETIC.

℞

Chloroform	12 parts.
Tinct. aconite	12 "
Tinct. capsicum	4 "
Tinct. pyrethrum	2 "
Oil cloves	2 "
Camphor	2 "

Dissolve the camphor in the chloroform, then add oil of cloves and then the tinctures. The venerable Dr. Parsons, in sending this formulæ for publication, says: "I cannot expect to remain much longer in this world, and I want the profession to know the value of this local anæsthetic."—*Southern Dental Journal.*

EXALGINE IN NEURALGIA.

Dr. T. R. Fraser has found this remedy very efficacious in production of anæsthesia, especially in neuralgia. The dose varies from a six centigrammes (one grain) to a gramme (fifteen grains) in twenty-four hours. The following formula is recommended by him:

℞

Exalgine	2.50 grammes.
Peppermint water	5 "
Orange syrup	30 "
Distilled water	120 "

S.—A teaspoonful twice a day.

—*La Presse Médicale Belge.*

In case the peppermint taste be disagreeable to the patient, the following formula recommended by Dujardin-Beaumetz, may be employed:

℞

Exalgine	2.50 grammes.
Tinct. orange peel	5 "
Distilled water	120 "
Syrup orange	30 "

S.—A tablespoonful morning and evening (0.25 grammes), 4 grains of exalgine.

—*Deutsche Med. Zeitung.*

GONORRHŒA.

Thomas R. Neilson states that the plan of internal treatment which he has pursued for so many years past, consists, first, during the earlier stages of the disease, in the administration of an alkaline sedative mixture, with the purpose of alleviating the scalding caused by urination, the tendency to frequent micturition and to chordee. The standard formula in his dispensary practice has been.

℞

Potass. acetat	3 drachms-½ ounce.
Potass. bromid	1½ drachms.
Acid boric	2 drachms-2 scruples.
Tinct. belladon	30 minims.
Liq. potass. citrat	8 ounces.

M. Sig.: A teaspoonful in water every three or four hours.

Secondly, as soon as the symptoms are in a measure relieved, the administration of either oleoresin of cubebs and balsam copaiba in capsule, or cubebs alone in powder, in teaspoonful doses, or finally, where chordee is troublesome, a combination of two parts by weight of powdered cubebs and one part of bromide of potassium, given in the same doses, and from three to four times daily.—*Univ. Med. Mag.*

FOR HAY FEVER.

L'Union Médicale recommends the following snuff for hay fever:

℞

Acid boric. pulv	gramme 2.0.
Natr. salicyl	gramme 2.5.
Cocain mur. pulv	gramme 0.12.

M. Sig. For snuff.

For the eye symptoms a solution of sulphate of copper or sulphate of zinc, for a wash, 10 drops of iodide of ethyl or 3 drops of nitrite of amyl may be inhaled at the onset of an attack, and the patient sent to a different climate or place.

TO REMOVE THE ODOR OF IODOFORM.

While there are several preparations that will remove the odor of iodoform from the hands, the most of them merely substitute an almost equally unpleasant odor. The *Deutsche Medizinal Zeitung* claims that washing the hands in linseed meal and water, once or twice, will cause an immediate disappearance of the odor of the drug.

IN ACUTE BRONCHITIS.

A simple expectorant mixture in acute bronchitis is:

℞ Ammon. muriat.....3ss.
Mist. glycyrrhiz. comp.....3iv. M.
Sig. Take a dessertspoonful every four hours.

The dose is smaller in the extremes of life, and in severe coughs it is given every three hours.

Tablets of the muriate of ammonium and the compound licorice mixture are very efficient. When the secretions are with difficulty brought up, the use of senega is advised.

When the secretions are abundant and not easily coughed up, turpentine in emulsion is an excellent remedy, not so pleasant, perhaps, as terebene or terpine hydrate, but rarely failing to do good in properly selected cases. The formula, with occasional modifications to suit particular cases, is:

℞ Ol. terebinthin.....3ij to 3iij.
Mucil acaciæ.....q. s.
Aq. cinnamomi.....3j.
Aquæ, q. s ad.....3vj. M.
Sig. A tablespoonful in a little water every four hours.

Ofttimes the cough is of such an irritating character that these ordinary expectorant mixtures avail little; then recourse must be made to a narcotic in some form. Codeine, a very useful alkaloid of opium, has the advantage of not constipating as much as morphine. A good combination is:

℞ Codeinæ sulphat.....grs. viij.
Syr. prun. Virginian.....3ij. M.
Sig. A teaspoonful in a little water three or four times a day and at bedtime if necessary.

—*Therapeutic Gazette*, July, 1891.

"ACTINA."

Prof. Flavel B. Tiffany, says the extensively advertised "Actina" has this composition:

℞ Menthol crystals.....3j.
Alcohol.....3ss.
Ether sulph.....3j.
Oil mustard.....3ij.
Sponge sufficient to make.....3j.

Or

℞ Menthol crystals.....3j.
Ether hydrobromic.....3j.
Oil mustard.....3ij.
Sponge sufficient to make.....3j.

—*Kansas City Med. Index.*

AMENORRHŒA.

The following is recommended as a reliable emmenagogue in many cases of functional amenorrhœa:

℞ Bichloride of mercury.
Arsenite of sodium, aa.....gr. iij.
Sulphate of strychnine.....gr. jss.
Carbonate of potassium.
Sulphate of iron, aa.....gr. xlv.
Mix and divide into sixty pills. Sig.: One pill after each meal.

—*Revue Med. Chir. Mal. Femmes.*

HÆMORRHOIDS.

Preissmann (*Fort. der Krank.*) recommends the application of pledgets of cotton soaked in the following:

℞ Potassii iodidi.....3ss to 3j.
Iodi.....gr. iij to gr. xv.
Glycerin.....3j. M.

OIL OF TURPENTINE.

Oil of turpentine is administered in France preferably in the form of *Recamier's emulsion*, which, according to the *Pharmaceutische Zeitung*, is as follows: Oil of turpentine, g. 12; egg yolks, No. 2; syrup of mint, g. 64; syrup of orange flower, g. 32; syrup of ether, g. 22; tincture of cinnamon, g. 2.

THE HYPODERMIC USE OF QUININE.

The statement was lately made at the *Société de Pharmacie* that Dr. Laveran had renounced his habit of prescribing lactate and hydrochlorate of quinine for hypodermic injections. Taking advantage of the property possessed by antipyrine of aiding in the solution of the salts of quinine, he now employs a formulæ composed of 1 gramme of hydrochlorate of quinine, 50 cg. of antipyrine and 2 grammes of water. He says that these solutions give no pain whatever, while those of the hydrochlorate alone, or the lactate alone, have usually caused a certain amount of trouble.

A PURGATIVE FOR CHILDREN.

℞ Castor oil.....3iv.
Infusion of coffee.....3ij.
Powdered sugar.....3v.
Yolk of egg.....No. j. M.

Make an emulsion.—*L' Union Médicale.*

A STIMULATING EXPECTORANT.

℞ Ammon. carbonat.....gr. v.
Tr. Nuc Vomicæ.....ɱ x.
Tr. Scillæ.....3ss.
Inf. Serpentariæ.....3j.
M. Sig. Three times a day.

—*Fothergill.*

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NEVER ROLL A MANUSCRIPT! Try to get an envelope or wrapper which will fit it.

When it is desired to call our attention to something in a newspaper, mark the passage boldly with a colored pencil, and write on the wrapper "Marked copy."

The Editor will be pleased to get medical news, but it is important that brevity and actual interest shall characterize communications intended for publication.

LEADING ARTICLE.

THE CHOICE OF AN ANÆSTHETIC IN OBSTETRICAL PRACTICE—THE PROPER TIME FOR ITS ADMINISTRATION AND THE METHOD OF ADMINISTERING.

Relative to the choice of an anæsthetic in labor we have two principal drugs to deal with—ether and chloroform. The former is the more stimulating, but it is bulky, inflammable, and not infrequently irritating to the lungs; chloroform, on the other hand, is sedative, more agreeable to the taste, more concentrated and powerful, and requires a less amount to cause analgesia or anæsthesia. For these reasons, chloroform is justly considered to be the agent *par excellence* in producing obstetrical anæsthesia. This is true, however, only of its use as an analgesic (Lyman). When complete anæsthesia is required for the graver operations of midwifery, ether should be employed.

In reference to the time at which the anæsthetic should be given, chloroform, ordinarily, should not be administered during the first stage of labor, partly because of its tendency, when given at too early a period, to weaken the contractions of the uterus, and partly because protracted anæsthesia has a tendency to impair the cardiac force (Lusk). There are, however, numerous exceptions, as for instance, when patients suffer more severely during the first stage than during the second. In point of fact, the time for the use of these agents should depend largely upon the individual peculiarities of each case, remembering that the object desired is the alleviation of pain by *anæsthesia*, and not the production of *narcosis* through a determination to abolish pain altogether. According to Dr. Lyman, and other authorities, the unfavorable results which are often ascribed to anæsthesia during an early period of labor are due to an altogether *excessive* use of the anæsthetic.

In the major operations of obstetrical work, when profound anæsthesia (narcosis) is required, ether, as previously stated, should be employed, and its administration is to be

conducted on the general principles observed in its employment for other surgical purposes.

In normal labor, chloroform is manifestly preferable, and the mode of its administration for this purpose differs materially from that employed for surgical anæsthesia. While the one is a continuous state of partial anæsthesia in which the influence of the agent is slight and readily passes off, the other is a regular progressive process carried steadily to a definite point, the patient being so profoundly narcotized that a return to consciousness requires considerable time. The open method of exhibition is the better.

At the beginning of each pain the patient should be directed to take a number of deep inspirations, the anæsthetic being kept at a little distance from the mouth. By this means, according to Dr. W. T. Lusk, the patient is prevented from inhaling an undue amount of the anæsthetic during the expiratory efforts which are put forth in the acme of the pain.

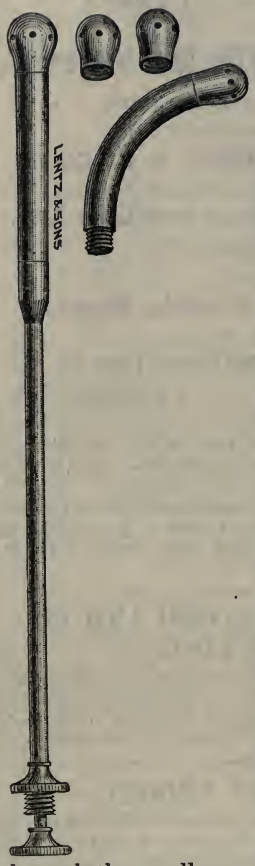
The chloroform should be used in small quantities at a time—the additions being made drop by drop. Continued attention should be paid to the general state of the patient during the use of the agent, remembering that success in the management of obstetrical anæsthesia requires the most scrupulous care and incessant watchfulness, as well as considerable skill upon the part of the anæsthetizer.

THE PHARMACY OF IODOL.

Dr. Tronchet lately communicated to the *Bulletin Médical* his views as to the pharmacy of iodol, which he thinks should be employed with olive oil. In quantities of 10 to 150 it makes a clear and elegant preparation. He gives the following formulæ: Emulsion—Iodol, 1 gram; neutral glycerin, 10 grams; water, 20 grams; gum acac., 2.50 grams. Solution—Iodol, 10 grams; olive oil or oil of sweet almonds, 150 grams. Crayons and Bougies—Iodol, 50 cg.; lanolin, wax and gum, of each 25 cg. Ointment—Iodol, 1 gram; vaselin, 10 grams. Dr. Tronchet says he has tried all the formulæ and prefers the above.

CORRESPONDENCE.

A NEW INSTRUMENT FOR THE APPLICATION OF OINTMENT TO THE MALE URETHRA.



To the Editor of the Medical and Surgical Reporter:—I submit to you and your readers an instrument for the application of ointment to the male and female urethra. The cut shows the simplicity of the instrument. The barrels are interchangeable and fitted to different sized bulbs graduated from 18 to 22 American scale. If the ointment is very thin, it can be drawn up into the barrel, and if too stiff, remove the barbarrel and by repeated thrusts into the ointment it can be completely filled. When properly charged and introduced into the urethra, gradually withdraw the instrument and at the same time push the piston home, forcing the ointment through the small openings in the bulb, thus distributing the ointment evenly over the dilated urethra. The ointment makes its exit through the largest circumference of the bulb, and therefore insures its thorough application. The instrument can, by removal of piston, be converted into an irrigator, for the thorough cleansing of the urethra.

Lentz & Sons made the instrument I am using, and I must thank them for the wood cut they have so neatly executed. The instrument is gotten up antiseptically and can be readily cleansed.

Dr. D. W. Boone,
Bellaire, Ohio.

Truth is mighty, but she is ignominiously worsted when she encounters a fishing excursion.

Book Reviews.

TABLES FOR DOCTOR AND DRUGGIST, compiled by Eli H. Long, M. D., Professor of Materia Medica, Buffalo College of Pharmacy; Adjunct Professor of Materia Medica, Medical Department, University of Buffalo. Detroit, Geo. S. Davis, 8vo., 133 pp. Price, $2.00.

The object of this excellent compilation is to bring into convenient form for ready reference information that is wanted daily by the physician and pharmacist. The work is divided into five parts: (1) a table of solubilities; (2) table of reactions and incompatibles; (3) table of doses and uses of medcines; (4) table of specific gravities, and (5) table of poisons and antidotes.

The table of solubilities treats especially of the solubility of the various substances in water and alcohol at 15° and 100° C., but also treats of all other solvents likely to be used by the physician or pharmacist.

The table of reactions and incompatibles is the distinctive feature of the book; no reactions are included that are not recognized by good authority or that are chemically improbable.

The table of doses fiurnishes what seems to be a complete list of medical substances now employed, with their doses and principal uses.

The table of poisons includes symptoms, toxic doses, treatment, and explanatory notes.

The compilation is an exceedingly valuable one, the book is well printed, and deserves a place in the library of every physician and druggist.

NOTES ON NEW REMEDIES, INCLUDING THOSE ON THE ADDITIONS TO THE BRITISH PHARMACOPŒIA OF 1890, compiled by E. B. Shuttleworth, Dean, and Professor of Chemistry, Ontario College of Pharmacy; Lecturer on Pharmacy at Trinity Medical College, Toronto; Editor of the *Canadian Pharmaceutical Journal*, etc. Toronto: Monetary Times Printing Co., 72 Church Street, 1891. 16mo., 87 pp.

These notes have been compiled from original and secondary sources into a form very useful to the physician and pharmacist.

In treating of the various remedies, the chemical characters are first considered, then the general characters, then the properties and uses, and finally the method of administration.

The notes have evidently been carefully prepared, and the little book is printed with very clear type on good paper.

PERISCOPE.

THERAPEUTICS.

THE ABORTIVE TREATMENT OF GONORRHŒA.

The treatment of gonorrhœa in its early stages by strongly irritant injections, particularly those of nitrate of silver, at one time exceedingly popular, is now seldom applied by those most experienced in venereal diseases. This is because such treatment in practice was often ineffectual, and because when it failed the violence of the original attack of urethritis seemed to be greatly exaggerated. As a result of this increased severity and duration of inflammation, tight strictures were much more commonly observed than was the case when gonorrhœa was treated by less irritating injections. It was also claimed that epididymitis was a very common sequel of anterior urethritis treated by nitrate of silver. The latter statement has, however, been shown to be false.

There are, then, sufficient grounds for abandoning a treatment which is so uncertain as to its successful issue, and is liable to be followed by a condition more grave than that for the cure of which the remedy is applied. There have always, however, been a number of practitioners who steadfastly adhered to the abortive treatment of gonorrhœa by silver nitrate, and who could show records in proof of their statements that in suitable cases the method was followed by sufficiently satisfactory results.

It has lately been proved experimentally that silver nitrate as a germicide acts upon the gonococcus even more powerfully than bichloride of mercury, and the employment of this drug in weak solution has been advocated as an excellent continued treatment in gonorrhœa.

Both the gonococcus and nitrate of silver produce the same effect upon the urethral mucous membrane; that is, they cause a desquamation of the epethelium and an active inflammation of the deeper structures. The nitrate of silver, however, acts very rapidly—within a few hours—while the gonococcus requires several days to produce its full irritant effect. If, then, before the gonococcus has time to penetrate more deeply than the epithelium, an injection of silver is employed, it seems fairly reasonable to hope that it may not merely destroy the microbe, but may also cause it to be thrown out from the urethra by occasioning almost imme-

diately an active inflammatory discharge, which, from its owing its cause solely to a chemical irritant, may be expected to subside entirely in a few days. If, however, the gonococcus has had time to penetrate deeply within the mucous or submucous layer, further irritation cannot accomplish its throwing off, but will simply diminish tissue resistance, and all the pabulum of the invading microbe, thereby increasing its multiplying powers.

It seems clear, then, that the abortive treatment cannot be entertained except in the very earliest period of a gonorrhœa; that is, when the tickling at the meatus and the drop of clear or slightly clouded mucus denote that the epithelium is invaded. Picard, the ablest modern exponent of the abortive treatment, holds that a red meatus, with swollen, everted lips, a turgid glans and intense pain, constitute absolute contra-indications to this method of treatment, even if the case is seen early in its course.

The strength of the injection should vary from fifteen to twenty grains to the ounce of water. This produces a sufficient degree of irritation, yet is not strong enough to be followed by subsequent cicatricial contraction. The patient should first be instructed to urinate. Then the nozzle of a blunt-pointed syringe should be inserted into the meatus, the urethra should be compressed about two and a half inches farther back, so that the injection may not penetrate more deeply than is required, and the silver solution should be forced in so that all the urethra anterior to the point of pressure is fully distended. The solution should be retained a few seconds; it can then be allowed to escape by relaxing the pressure of the nozzle against the meatus. The anterior portion of the urethra should be distended and emptied till the syringe contains no more fluid. Urination should be postponed after this as long as possible.

According to Picard, the pain of this treatment is rarely severe. In a few hours there is a yellowish-white running, often blood-stained. This diminishes, becomes white, and in twenty-four hours is changed to a purely serous discharge, which entirely disappears in a few days. If the free discharge persists for from twenty-four to thirty-six hours, the treatment may be repeated, provided the parts are neither red nor painful.

The unfortunate part of this method is that patients rarely present themselves before the invasion of the urethra is too far advanced to admit of the abortive treatment. In suitable cases, however, it is a safer method and gives fairly constant results.=*Univ. Med. Mag.*

THE TREATMENT OF NON-OPERABLE CANCERS BY MEANS OF INTERSTITIAL INJECTIONS OF PYOKTANINE.

V. Mosetig is reported to have presented before the Society of Physicians of Vienna (*La Tribune Medicale*, April 2d, 1891), several cases of cancer materially improved by injections of pyoktanine:

1. A woman with sarcoma of the lower jaw. After fifty injections (in all 120 grains of pyoktanine) considerable diminution in size of the tumor.

2. Sarcoma of the sternum. Only the fibrous stroma of the tumor remained.

3. A man, 58 years of age, suffering for eight months with sarcoma of the tongue and floor of the mouth. Result: removal of all bad odor and pain; the tongue has become again mobile.

4. Female, aged 47, with an epithelioma of the face. Twenty-seven grammes of pyoktanine used, with the result that the infiltration is less hard, several nodules have separated off; the general condition has much improved.

Amelioration was also obtained in a woman with cancer of the bladder and in a man with an adeno-cancer of the pelvis. In the former there was cessation of the hæmaturia; in the latter, the tumor diminished three-quarters in size. Mosetig recommends that the solution be made of the strength of one part pyoktanine to 500 of liquid; the injection, containing two to three grammes of the active substance, should be made at the periphery of the tumor on a level with the healthy tissue.

Under the influence of the injections, the pains are said to disappear, the tumor is observed to gradually diminish in size and to become in part sloughing, in part to soften and to undergo fatty degeneration and absorption. Billroth, on the other hand, had tried the staining fluids in about thirty cases without ever having observed absorption or diminution in offensive odor. Sometimes a softening of the tumor was seen, but it could be considered as due to an aggravation of the disease rather than to anything else.

In the same journal (May 21st), Mr. Quinn reported before the Chirurgical Society of Paris that he had used injections of pyoktanine in tubercular as well as cancerous cases. In the former, no result whatever was obtained, in the latter, slight amelioration.

In a case of epithelioma of the mouth, the injections were followed by very marked facial œdema. In a case of lympho-sarcoma of the thigh, ten injections were made. The centre of the tumor was softened, but not the slightest influence was exerted on the periphery.—*Jour. Cut. Gen. Dis.*

EUROPHEN.

This new antiseptic medicament designed to replace iodoform is obtained by the action of iodine upon isobutylorthocresol. Its pharmacolgy and bacteriolgy have been studied by Siebel, and its therapeutic action by Eichhoff.

Europhen is an emorphous, yellow powder, exhaling a slight odor resembling that of saffron. It is insoluble in water and in glycerine, and is more soluble than iodoform in alcohol, ether, chloroform and the oils. Europhen adheres better than iodoform to the skin and to open wounds, and an equal quantity of it by weight, will cover a surface five times greater.

This iodide of isobutylorthocresol is not toxic. Dogs were found to take 2 or 3 grammes of it with impunity and the human organism will bear 1 gramme of it without unpleasant phenomena save a slight feeling of weight in the stomach.

The urine of patients who had absorbed Europhen did not contain iodine.

Eichhoff employed it successfully in dressing both hard or soft chancres. He used it as a powder, and also in the form of 1 per cent. or 2 per cent. ointment. He furthermore employed it successfully in hypodermic injections for syphilitic patients suffering from the secondary and tertiary symptoms of syphilis. These injections consisted of 1 gramme of Europhen to 100 grammes of olive oil, and of this, one-half to one cubic centimetre was injected daily in one dose.

Eichhoff also employed Europhen in varicose ulcer and ulcerative lupus as well as in eczema, psoriasis and favus, in all of which it proved to be efficacious.

Ointments containing 1 per cent. to 2 per cent. of Europhen are as strong as need be used. Five per cent. ointments caused a certain amount of irritation.—*La Semaine Medicale*, July 29, 1891, *Repertoire de Pharmacie*, Aug. 10, 1891.

THE ACTION OF SULPHUROUS ACID ON THE ECONOMY.

The importance of a knowledge of the effects of sulphurous acid on the human organism has been of late very much increased by the frequency with which this agent is now employed for the preservation of wine and vegetables. It is known that after animals have been poisoned by breathing air impregnated with sulphurous acid, the highly irritating properties of the gas are manifested by the injected state of the blood-vessels of the mucous membrane of the respiratory tract where the sulphurous acid has come in contact with it, the blood of the viscera being found dark and coagulated. Also that animals that are not killed recover very rapidly, but after a few days show signs of bronchitis and pneumonia, and die. The subject has recently been examined by Dr. L. Pfeiffer, who in some experiments employed sulphurous acid in the form of neutral sulphite of sodium, and not in the free state, so as to avoid the caustic action. He found that both warm and cold-blooded animals recovered very rapidly from an almost moribund condition, which showed that there must be either very rapid elimination or a chemical change into some harmless substance. Experiments instituted with the object of elucidating this point showed that 96.5 per cent. of the sulphite was eliminated by the kidneys as sulphate, the remaining 3.5 per cent. only as sulphite. When a large quantity of sulphite had been administered it was nearly all eliminated in five hours. Dr. Pfeiffer believes that when vegetable feeders are made to breathe air containing free sulphurous acid for some considerable time a reduction of the alkalinity of the blood is induced. In animals breathing air containing from one to three parts of sulphurous acid per thousand intense inflammation of the tracheal and bronchial mucous membrane was produced, also inflammatory foci in the tissue of the lungs, the blood in the capillaries becoming black and coagulated. Injections of a 5 per cent. solution of sulphurous acid into the stomach set up very extensive and severe gastritis, not only all the coats of the stomach itself being affected, but also the superficial portions of neighboring organs, as the liver and the diaphragm, death occurring in from three to five minutes. It is suggested that this rapid and far-reaching action may be due to the disengagement of the gas by the heat of the stomach, so that it diffuses itself much more rapidly than a liquid could do. Dr. Pfeiffer finds that in some wines there is as much as eight parts of sulphurous acid, probably as bisulphide of lime, in 100,000, and that in preserved vegetables, such as are used in the

army and on board ship, there is often a very appreciable quantity either free or combined with alkalies, this being especially the case with preserved asparagus.—*Lancet.*

A SUGGESTION FOR HYPODERMIC PURGATION.

At a meeting of the Louisville Medical Society, one of the members, Mr. Flexner, called attention to a comparatively new drug, the sulphate of eseredine, from the laboratory of Bœhringer in Germany. It appears that so far its use has been restricted to animals, on whom it acts, when injected subcutaneously, as a purgative. Should this action be reproduced in the human subject, we shall probably find a valuable addition to our Pharmacopœia. The principle of active purgation in any stage of peritonitis as an effectual means of draining the peritoneum is now very generally recognized. There are often difficulties, however, in the way of administering croton oil or other powerful cathartics by the mouth, especially where vomiting is already a pronounced symptom. As another speaker pointed out at the same meeting it is very desirable that we should have something as a purgative to act in a manner corresponding with apomorphia as an emetic. Certainly a drug that would act rapidly in the manner indicated, without undue depression of the nervous system would be invaluable in many conditions of the abdomen and pelvic organs. The suggestion is of very great interest and of possible future value, and surgeons who make the abdomen the field of their operations may find it worthy of careful attention. The mastering of all bodily functions, physiological and anatomical, by the local selective action of remedies is probably only a matter of time.—*Med. Press.*

LOCAL USE OF MENTHOL AND ENCATYPTOL IN AFFECTIONS OF THE MIDDLE EAR.

Dr. Adolph Bronner, gives some interesting facts concerning the use of these remedies in certain diseases of the ear. "The most favorable cases seem to be those of chronic swelling of the mucosa, whilst in the initial stages of some cases of sclerosis I was inclined to think that I had prevented the encroaches of the disease. When the mucosa is greatly swollen, I direct the use of a snuff of boric acid with two per cent. of menthol to be frequently used in small quantities, while at the same time I inflate the middle ear with the catheter and menthol vapor. A few drops of a twenty per cent. solution of menthol in olive oil is poured into an antiseptic capsule, and this is then firmly attached to the catheter." The capsule used is similar to the Hartman capsule, and the current is passed through by use of Lucæ's modification of the Politzer bag. The vapor is slowly inflated, and much stress is put on the *prolonged use* of this agent upon the diseased mucosa. "I do not remember having produced any pain or inflammation from this procedure, and on the contrary, I think, that by the use of the menthol I have been able to relieve the slight occasional pain."—*Archives of Otology.*

TREATMENT OF PHTHISIS.

In a clinical lecture Dr. William Pepper deals with certain points in the treatment of pulmonary phthisis. Inhalations are better than the use of drugs in paroxysms of cough. As an inhaler he prefers a simple jar with ample cork. Through the cork insert two tubes, have the material to be used placed in the jar, and allow the patient to draw air through the shorter tube. This apparatus can be made in a portable form by using short bent tubes, corked at each end, in which is placed sufficient of the preparation for one dose. A number of these tubes can be carried in the pocket; when the patient feels that a spell of coughing is coming on, he can open a tube and inhale its contents. A fair prescription for this purpose is the following:

℞
Creasoti.....3j.
Tr. iodi.....3iij.
Chloroformi.....3ij.
Sp. vini rect.....q. s. ad. 3j. Misce
Sig. Inhale ten drops.

Carbolic acid can be substituted for the creosote in somewhat smaller doses. Thymol, a highly volatile antiseptic, agreeable in odor, can be tried; tincture of conium may replace the chloroform. Occasionally, for a variety of reasons, a cough mixture may be necessary. Given in syrup form the expectorants are apt to be somewhat nauseating. Dr. Pepper prefers some such pill as the following, which relieves cardiac excitement in case of fever, is rather expectorant, and allays irritation:

℞
Ext. opii.....gr. iii-v.
Pulv. digitalis.....gr. xv-xxx.
Pulv. scillæ.....gr. xv-xxx.
Quininæ sulph.....gr. xxx.
Div. in pil. xxx. Misce
Sig. One, two to four times a day.

If the squill nauseate, it may be left out.

In place of the opium, if it be found to be too constipating, codeine may be given. Constitutional measures which will at the same time favor the appetite, be antiseptic, and help to render the lung a less favorable nidus for the bacillus, can all be added in one prescription, such as the following, which is not unpleasant to take:

℞

Creasoti	gtt. xxxij.
Tincturæ gentianæ co	ʒj.
Tincturæ nucis vomicæ co.	ʒij.
Sp. vini gallici	ʒij.
Glycerini	ʒj.
Vini xerici	Oj. Misce

Sig. A dessert to two tablespoonfuls.

—*St. Louis Med. and Surg. Jour.*

ACONITINE IN TRIGEMINAL NEURALGIA.

Dr. Seguin, in his lectures on the treatment of neuroses, strongly recommends the use of this alkaloid in cases of tic-douloureux. His opinion is that cases are either cured by this drug, or that, at least, it is possible to give long intervals of freedom from pain; but it must be pushed, and its administration is not without danger. The form which he recommends for its administration is in a pill containing $\frac{1}{200}$ of a grain of Dusquenal's crystallized aconitine. These pills are given to the patient in gradually increasing quantity until numbness is felt all through the body with chilliness, and, in some cases, even nausea and vomiting. At first he gives one pill twice a day to females, and three times a day to males, and it is not unfrequently necessary to give as many as twelve pills daily. After the dose is found which is both efficacious and tolerable the treatment is kept up for several weeks after the pain has ceased, and the patient is directed to take a large dose—two or three pills—on the least return of the characteristic sharp pain. Even if no syphilitic history is given, and although there should be no reason to suspect it, this treatment is continued with the administration of the red iodide of mercury in doses increased from one-twentieth to one-fifth or one-sixth of a grain, and iodide of potassium from twenty to forty-five grains, largely diluted with water, after each meal. This medication is continued for two or three months steadily, and a course of a month of it is subsequently given every few months. Along with those drugs the patient must have an abundance of nutritious food, and it is advisable to administer cod-liver oil as well.—*Lancet.*

THE ADVANTAGE OF COMBINING IODINE WITH GLUCOSE.

The remedial value of iodine is well known. But it is also a fact that full doses cannot be administered internally except in the form of iodine of potassium. As a rule, in the various forms of disease to which free iodine is applicable any combination having an alkaline base is not desirable. In order to secure the specific action of a remedy adapted to relieve chronic disorders, and it is to this class of diseases that iodine is chiefly applicable, it is important that it should be to a certain extent cumulative and retained in the circulating blood for a sufficient length of time to exert its specific action upon diseased tissues. In glucose we have an agent capable of absorbing, or rather of occluding, free iodine so that this metalloid cannot be detected by either odor or taste, aud thus combined can be administered in much larger doses than formerly employed without producing unpleasant symptoms. Another advantage in giving iodine occluded by glucose is found in the fact that as this substance occurs normally in the contents of the small intestine, in the chyle after the use of amylaceous and saccharine food, in the blood of the hepatic veins, and in the tissue of the liver in the form of glycogen, it is probable that glucose in thus occluding free iodine is itself protected from chemical change during the process of digestion by the antifermentative quality of the latter, and hence may be readily absorbed into the circulation, carrying in its embrace the iodine to be liberated during the morphological changes that occur prior to the formation of new blood-corpuscles. In the formula, thirty grains of iodine are dissolved in four ounces of water by means of one hundred and fifty grains of potassium iodide; to this solution is added twelve ounces of syrup as prepared by the sugar-refineries and sold by grocers under the name of golden syrup, or sugar-house syrup, or molasses. This syrup contains glucose in combination with organic matter, and answers the purpose quite as well as glucose manufactured from starch by the action of sulphuric acid, or other glucosides furnishing this substance in the isomeric form. In the *Medical Record* for June 13, 1891, Dr. F. P. Mann gives the following formula as representing the best combination for iodine and glucose, with the caution that simple syrup must not be substituted, for this, containing entirely crystallizable sugar, will not take up the iodine, and the result will be

a strong solution of iodine, wich cannot be taken without serious inconvenience. Dr. Mann writes that he has produced the most satisfactory, even remarkable, results, where potassium iodide or syrup of the iodide of iron had signally failed, with the following formula:

℞ Iodinii.....3ss.
Potass. iodidi.....3iiss.
Aquæ puræ.....3iv.
Syrup. fuscus.....3xij.
Ess. gaultheriæ.....3ij. M. Fiat sol.
Sig Take a tablespoonful between each meal with a little water. (Syrupus simplex must not be used.)

He advises when using this formula to keep the preparation for about twenty-four hours before commencing its use, as from six to ten hours are required in which to completely occlude the free iodine. He adds that a larger proportion of the free iodine can be given than the above, and the preparation of the free iodine can still remain odorless and tasteless so far as free iodine is concerned; though where a stronger combination is employed it would be advisable to commence with a smaller dose and increase it gradually.—*Ther. Gaz.*

MEDICINE.

THE CARE OF THE THROAT AND EAR BEFORE AND DURING THE INFECTIOUS DISEASES.

In treating the throat lesions, Dr. E. E. Sattler writes, we must always take into consideration the age of the patient, the stage of the disease, the extent and thickness of the membrane formed. Antiseptic irrigations, sprays, or gargles, should be used every half hour or so in the manner and with the solution mentioned in the prophylactic treatment. This treatment must be kept up at night, as well as day, without fail. Whatever membrane comes off with gentle pressure can be removed, and the throat swabbed every few hours with a solution of bichloride of mercury in strengths from 1:500 to 1:1,000. I believe that this remedy will accomplish our aim best and has given the most uniformly good results. Strong caustics of all kinds must be handled with the greatest of care, and we must remember that by denuding or abrading healthy mucous membrane in proximity to the diphtheritic process, we run the risk of more extensive infection. In children, I think, strong caustic agents are absolutely contra-indicated. When the membrane is very thin we can rely on one or the other of the solvent remedies mentioned above, and then use the bichloride swab. Forcible separation of the false membrane, I think, is always uncalled for, and frequently acts in a detrimental way. Continuous cleansing of the infected nose, naso-pharnyx, and throat by antiseptic solutions, day and night, swabbing the throat with a solution of bichloride of mercury, eternal watchfulness, and constant vigilance constitute a rational treatment of the most common throat lesions. Of course, I do not mention the valuable assistance which we derive from internal medication in this disease, as it falls entirely outside the scope of these remarks. My purpose was simply to show what care should be taken of the throat, the *fons et origo* of these dreadful diseases.

When we come to consider the care of the ear before and during these affections, we come to a subject to which little attention has been paid, and which has been neglected by physicians generally. It has been estimated that 64 per cent. of middle-ear troubles are due directly to catarrhal troubles of the nose and naso-pharynx, and that 33 per cent. of the cases suffering from scarlatina develop an otitis media. By an early treatment of aural complications, no doubt this percentage could be materially reduced. But the methods of prophylaxis detailed above for the mucous membrane of the nose and throat, we are able indirectly to benefit the contiguous lining of the Eustachian tube and middle ear, and in this way prevent, or at least lessen, the extension of the inflammatory process inwards to the ear. In scarlet fever especially danger always threatens the ear, and it is the imperative duty of the physician to keep an eye on this delicate structure. A proper examination with good light at certain intervals is absolutely necessary. During the stage of desquamation especially, a sharp lookout must be kept, and sudden change for the worse, an elevation of temperature, increased fretfulness or severe pain, should call immediate attention to the ear. In older children the diagnosis of implication of the ear need not be so difficult; but in young children and infants it is often attended with uncertainty, and frequently the diagnosis is not made until the discharge of purulent matter is seen in the external meatus. It has become an old saying, and a good one too, that when you are called in to treat a crying child, and you do not know for what to treat it, treat it for the ear-ache. As a rule, however, before much treatment is instituted nature finds relief and an exit for the pent-up matter in the middle ear, by a perforation of the membrana tympani, and a more

or less profuse purulent discharge shows itself in the outer ear.

I cannot linger too long over details of treatment, as I know my time is almost up. It is my firm conviction, however, that a neglect to treat immediately the otitis media and the resulting otorrhœa constitutes an almost criminal action. To refuse to treat this discharge, to leave its arrest to nature, to belittle it by telling parents that their children will outgrow it, has been the means heretofore of more suffering and deafness in after years than all other troubles combined. In the dawn of the twentieth century such neglect, I hope, is a thing of the past. No other inflammation of the middle ear is followed by such quick destruction of the drum and contiguous parts of this sequela of scarlet fever. It requires immediate attention. When the drum has been perforated and this discharge is present in a greater or less quantity, gentle syringing with a lukewarm antiseptic solution, drying of the external meatus with the probe wrapped with cotton, the use of one or the other astringent remedies as the case may require, the gentle inflation of the middle ear by the Politzer method, is the treatment generally called for in ordinary cases. I, myself, am opposed to the careless and indiscriminate use of boracic acid or other powders, especially in the hands of general practitioners. This treatment must be continued as long as necessary, and of course in the hands of the specialists will be modified in a variety of ways for different cases.

In an early and rational treatment of this dreaded sequela of scarlet fever we must look for the benefit which will surely follow for the coming generation. May we hope that soon, with the intelligent and educated co-operation of the people and the physician, diphtheria and scarlet fever will be almost as radically stamped from the face of the globe as that one-time dreaded and frightful disease — small-pox. *Cincinnati Lancet Clinic.*

SOME RECENT CONTRIBUTIONS TO THE LITERATURE OF RAYNAUD'S DISEASE.

A most interesting and suggestive paper, entitled "A Contribution to the Diagnosis of Raynaud's Disease," was read before the New York Neurological Society, by Dr. Geo. W. Jacoby, on Jan. 6, 1891, and published in the *New York Medical Journal* of Feb. 7, 1891. He reviews the various theories advanced in explanation of the disease: viz., Raynaud's, that it is due to spasm of the vessels caused by a functional spinal irritation; the possibility that abnormal blood mixture might be the cause; the cases in which a neurotic origin seemed indicated by lesions found in the peripheral nerves and those occurring in acute infectious diseases. The main part of his paper consists in deductions drawn from a case of his own, which showed primarily typical Raynaud's disease, and which subsequently developed and died of chronic interstitial nephritis. This case is contrasted with others reported in syphilitic subjects by Klotz and Hutchinson, and the great clinical similarity insisted upon. Raynaud excluded from among his cases all those due to syphilis, but Dr. Jacoby says with great point: "This demand in itself shows the weak foundation upon which this diagnosis rests, for if in two different individuals all the symptoms of Raynaud's disease are present, without any other symptoms which might indicate the existence of anatomical disease of the arteries, we are asked in the one case to exclude the diagnosis of 'Raynaud's disease,' because the patient acknowledges having had syphilis, while in the other we must accept the diagnosis, because a syphilitic history is not obtainable. The difficulty in understanding these cases lies in the fact that the frequent occurrence of syphilitic disease of the peripheral vessels, excepting those of the brain, is not yet appreciated as it should be." As hinted in this quotation, the Doctor insists upon the probability of symmetrical gangrene being due, as has been proven in some cases, to obstruction of the end arteries by inflammatory processes in syphilitic cases, even when no lesion is apprciable in the large trunks, and of the probability of the same process existing in cases which are really syphilitic though not suspected or proven to be such. In his own case of symmetrical gangrene followed by cirrhotic kidney he regards the disease as probably due to non-syphilitic endarteritis, the arterio-capillary fibrosis of Gull and Sutton. The necessity of making a microscopical examination of the small arteries of affected areas in these cases is rightly insisted upon before the vascular origin of such processes can be excluded. Disease of large vessels may effect such lesions, but the absence of disease in the large vessels does not exclude the possibility of grave lesions in the terminal arteries.

His general summing up is as follows:

"From a consideration of the various data here adduced, from the nephritic as well as from the syphilitic cases, we are unavoidably forced to the conclusion that those authors who admit that an affection of the small arteries, be this an arteritis obliterans, or other change, does produce a similar clinical picture to that formed in Raynaud's disease, therein are right, but that these same authors are wrong when they contend that a differential diagnosis between the two affections can always be made. The points which are advanced by the various writers for the purpose of making the differential diagnosis are the following: Gangrene occurs in some cases of Raynaud's disease in places where endarteritis obliterans has thus far never been described (face, vulva, auricle, ear, nates, loins); the lesion in many cases of Raynaud's disease is confined to the superficial layers of the cutis, and this never occurs in endarteritis obliterans; the absence of those ætiological moments which produce vascular disease; absence of all palpable anatomical changes in the vessels; and, finally, the occurrence of symmetrical gangrene in neuropathic individuals only.

That these points are invalid and some of them erroneous becomes clear when we consider: (1) That it is probable that arteritis obliterans does occur in the vessels of the skin, as shown in the very excellent article of Klotz, entitled, "The Occurrence of Ulcers Resulting from Spontaneous Gangrene of the Skin during the Later Stages of Syphilis, and their Relation to Syphilis"; therefore, superficiality as well as location would not serve to exclude arteritis; (2) as regards the absence or presence of an ætiological moment (history of syphilis), I have already expressed myself at length; (3) if an arteritis occurs in the peripheral ramifications and spreads upward, then no anatomical change can be clinically detected; (4) that symmetrical gangrene occurs only in neuropathic individuals is a statement not supported by facts. It is true that nervous symptoms are frequently present, but these are often simply results of widespread vascular disease. We are, therefore, justified in concluding that the different diagnosis between Raynaud's disease and anatomical disease of the arteries can in many cases not be made *intra vitam*—in other words, many cases of so-called Raynaud's disease are really cases of arteritis.

The author's further contention that Raynaud's disease should be regarded as a symptom complex, and not as a distinct pathological entity, must commend itself to all who have investigated the subject.

In the *Sci.-J.-Kwai Medical Journal*, D. C. Haga announces that, as the result of the microscopical examination of thirteen cases of idiopathic gangrene, he had reached the result that it was due to arteritis obliterans of syphilitic origin. This article is unfortunately very brief, and would not on its face carry conviction to one who was not inclined to accept the results. As confirmatory of observations of other works in the same line, it is perhaps of value, but it seems a pity that such opportunities should have been apparently so inadequately utilized. The paper is of interest, especially in connection with Dr. Jacoby's.

In the *Lancet* of July 6, 1889, is recorded a case in which a transient attack of local asphyxia was determined by a dog-bite. The patient, a boy aged nine, was bitten on the left arm and hand. He was both anæmic and syphilitic. The coldness and lividity were most persistent in the left arm and hand, but the radial pulse being decidedly less full on that side than on the entirely unaffected right. The attack passed off in two hours entirely. Slight lividity of the ears was also noted. Slight attacks afterwards occurred, lasting on one occasion ten minutes, on another one hour. Once the left foot became cold and the toe blue after a warm bath. In spite of the co-existent syphilis, the shortness of the attacks, the final ultimate recovery after the wound was healed, and the existence of a well-marked peripheral irritation—all seem to indicate that this case was indeed due entirely to vascular spasm. It seems to the writer most plausible in the study of these cases to admit that the rapidly changing phenomena of typical cases of Raynaud's disease are due to vascular spasm. It is quite possible that the graver necrotic lesions are due to coincident vascular disease. It is quite possible that in infectious diseases, such as typhoid fever, symmetrical gangrene may be due to the inability of the feeble tissues to resist external irritants or infectious organisms by reason of general feebleness, interference with the trophic inervation or passing spasm of the vessels, independent of possible embolism. In the *Provincial Medical Journal*, Dr. W. Alexander cites a case as neurotic gangrene simulating Raynaud's disease in a boy of ten, who had an exanthem and fever prior to certain sloughs, which separated and healed when the boy got well.—*Epitome.*

THE ANAL REFLEX.

Rossolimo (*Neurologisches Centralblatt*, May 1st, 1891) says this reflex consists in a contraction of the anal sphincters in response to a stimulation of the skin and mucous membrane of the anus. It is invariably present in man in health. The branches of the inferior hæmorrhoidal, pudendal, and perineal nerves, on which this reflex depends, are connected with the third and fourth roots of the sacral plexus, which spring from nerve cells in the conus medullaris. This reflex can be obtained in the dog as well as in man, and Rossolimo cut the spinal cord across at different levels from above downwards; whenever the lumbar enlargement was cut across at the level of entry of the third sacral nerve, the anal reflex suddenly disappeared, from which it follows that the cells of the spinal cord which are connected with this reflex are situated in the third quarter of the lumbar enlargement, reckoning from above downwards. In another series of experiments the lumbar enlargement was exposed, and the sacral roots were cut one at a time. By this means it was proved that the anal reflex depended upon the integrity of the third and fourth sacral roots. This reflex therefore has its seat in the cord lower than any other reflexes. To obtain the anal reflex the patient may be either standing, the operator separating the glutei, or lying on his side with the legs drawn up. The skin and mucous membrane of the anus may be stimulated by stroking with a pin, a feather, a piece of paper, or some suitable object. The reflex is is shown by a contraction of the sphincter ani externus, and if it is very strong there is a drawing in of the whole anus, and even sometimes a contraction of the glutei. In women the testing of this reflex may be conveniently combined with a gynæcological examination. The author has examined this reflex in a great many conditions, and he comes to the following conclusions: It is increased in some cases of neurasthenia, in cases of myelitis high up in the cord, and in conditions in which there is a general exaltation of sensations. It is lost in multiple neuritis affecting the sacral plexus, in some cases of tabes, and in myelitis of the lower part of the cord, and in these cases there is generally also anæsthesia of the rectum, anus, and urethra. It remains normal in functional derangements of the bladder, the rectum, and the sexual apparatus.—*Brit. Med. Jour.*

NERVE STRETCHING.

M. Charcot related three successful cases of stretching of the sciatic nerve. A postman in going his rounds six years ago, fell on the right hip from a considerable height. Great pain along the sciatic nerve followed and lasted four months. Three years subsequently the suffering became again acute and resisted all medical treatment. M. Charcot tried what stretching would do, and a month after the operation all pain had disappeared, never to return. The second case was that of an artilleryman and the operation was equally successful, while the third was still more interesting. A young soldier suffered from sciatica of an absolutely rebellious nature. The operation produced immediate relief. In concluding, the speaker said he was surprised that elongation of the nerves was not more frequently resorted to. Out of 66 cases M. Lagrange reported 12 definite cures, 49 improvements, permanent or temporary, four totally unsuccessful cases and one death.—*Med. Press.*

THE HEALING OF TUBERCLES.

M. Virchow said: In order to be able to speak with precision of the healing of the tubercles and of the modifications consecutive to the injections of the liquid of Koch, it is necessary to distinguish the tissue which constitutes the tubercle itself (properly speaking, tuberculous tissue), on the one part, from the tissue which represents inflammatory exudate (catarrhal and caseous pneumonia), and which are not, strictly speaking, veritable tissues.

This admitted, there is reason to ask, on what does the remedy of Koch act? Does it act at once upon the three classes of pathological products? Without wishing to reply to this question by an absolute negative, I am able to say nevertheless that the visible effects of the injections, those that we are able to study directly, show that the action of Koch's remedy bears in an unequal manner upon the three pathological products already mentioned.

Let us first study the action of the remedy of Koch upon the tubercles properly speaking. If the remedy be really able to cause the resorption of the miliary and submiliary tubercles, this fact should have been proved in one way or another.

I have occupied myself much during my life in the research of cases where a resorption of the tubercles had been produced, but

I have never succeeded in getting together a number, though it be small, sufficient for observations of this species, and I ought to add that this number has by no means augmented since the use of the liquid of Koch.

With regard to the bacilli of tuberculosis, we know that Koch himself has declared that they are not attacked by his fluid.

For that which now concerns the neighboring tissues which are not tuberculous in the strict sense of that word, I am convinced by observations upon the living as upon the dead that it is upon these tissues, modified by irritation and inflammation, that the action of the remedy of Koch especially acts. In a certain sense this is a fact favorable for the patient; let it be understood that it implies the possibility of the elimination of the tubercles with the product of destruction of the neighboring tissues. But on the other hand it implies also the danger of an excessive irritation of these same tissues —danger of which we have several times seen examples.

I may not omit to remark that I have never spoken of the therapeutic value of the injections of the liquid of Koch. I do not say that it is dangerous. I have simply indicated the possibility of the danger without entering into any considerations upon the different cases and the circumstances in which this danger appears.

I desire to say to-day that in my opinion it is the tissue irritated or inflamed in the vicinity of the new formation which is the most influenced by the remedy of Koch. If we apply to the lungs and to the brain the action so well studied upon the skin in lupus and upon the laryngeal mucous membrane, there can be no doubt that the tissues bordering on the tubercles would become therefrom, after the injections, the seat of tumefaction, intense congestion, acute œdema, hæmorrhagic infiltration, immigration of leucocytes, nay, even of proliferation with formation of new tissue or of its elements.

With the exception of the cases of phlegmonous inflammation of an excessive intensity, of which I have presented to you the anatomical specimens, one can say that all the modifications produced by the remedy of Koch enter into the group of lesions already known, and are only some varied forms of the process of inflammation and of necrosis.

It has been observed, after some injections, that there is a diminution of the zone of thoracic hollow sounds, and this fact has been attributed to the action of the remedy of Koch on the tuberculous tissues. But it is evident that this phenomenon can only depend on a diminution of the catarrhal hepatization accompanying the tubercles, and ought not in any fashion to be placed to the account of the tuberculous tissues, properly speaking.

To sum up that which concerns the anatomical modification produced by the lymph of Koch, I will say that (1) we do not possess any evidence of destruction of the bacilli; (2) there does not exist any fact directly demonstrating the resolution of the tuberculous virus and the resorption of the tubercles; (3) we have already a whole series of observations to support the fact that the destruction of the tubercles and of the neighboring inflammatory tissues is accelerated by the method of Koch. Otherwise we know nothing still which is of a nature to demonstrate that the injections favor the process of induration and the encapsulation of the caseous masses. Quite to the contrary, there is reason to believe that the liquid of Koch is capable of mobilizing afresh some caseous masses already encapsulated, and of establishing in this manner some fresh centers of infection.

I will say in conclusion that I am far from considering my researches at an end. I acknowledge with pleasure that it will be very important to control the observations of M. M. Grabower and Flatau, in which some submiliary tubercles, appearing during the treatment by the method of Koch, have disappeared in the course of further injections. I do not consider this assertion as impossible, but M. Flatau will pardon me if I deem a little strange the disappearance of tubercles under the influence of a remedy that had provoked the eruption.—A. M. Gillett, in the *Amer. Pract.*

ACUTE PULMONARY CONGESTION OF A PSEUDOPLEURITIC TYPE.

M. Berthier (*Revue de Medecine*, April, 1891) says there is a form of pneumonia which gives the signs of pleural effusion, namely, complete dullness on percussion and absence of vocal vibrations and breath sounds. It has been termed by Professor Grancher "*pneumonie massive.*" The ramifications of the bronchial tubes up to the larger divisions are filled with exudation. M. Grancher has also described another form which yields similar physical signs, and which he has named "*spléno-pneumonie.*" He supposes it to be due to a sero-albuminous and epithelial inflammation. M. Berthier then reports a case occurring in a young man after influ-

enza. There were signs of fluid at the left base, but exploration with the needle was negative. The expectoration consisted at first of pure blood. On the fourth day the patient became much worse; he was cyanosed. Similar signs were found at the right base, with bronchial breathing and bronchophony at the angle of the scapula. Later, friction sounds were heard over the subspinous fossa, first on the right and later on the left side. The patient was discharged well in six weeks' time. M. Berthier remarks that the "congestion" was very intense in this patient; the parenchyma of the lung was infiltrated with blood, as also the smaller tubes. During the last epidemic of influenza, cases of pulmonary congestion —and that, too, of a peculiar kind—were frequent. Dry pleurisy was also a common complication.—*Brit. Med. Jour.*

CHLORIDE OF GOLD IN LUPUS.

Dr. J. Rüsin (*Meditzinskoie Obozrenie*, No. 5, 1891, p. 509) reports the case of a peasant woman, aged 40, with extensive lupus of thirteen years' standing, successfully treated by the subcutaneous injection of a 1 per cent. solution of chloride of gold in combination with a 1 per cent. solution of cyanide of potassium. Nearly the whole face, nose, and forehead were involved, the cheeks, forehead, chin, and hard palate being studded with ulcers, the discharge from which contained tubercle bacilli. In all, six injections were given in the course of eleven days, the total quantity of either of the salts amounting to $\frac{3}{100}$ grain, the individual doses of the chloride varying from $\frac{1}{1000}$ to $\frac{1}{100}$ grain, and those of the cyanide from $\frac{1}{1000}$ to $\frac{1}{125}$. On the second day of the treatment, the subjective state markedly improved; on the third, the swelling of the face subsided, some old scars began to shed cuticle, and a labial ulcer distinctly decreased; on the 6th, some ulcers on the cheeks and hard palate commenced to heal, while the facial tumefaction and pain disappeared altogether; on the twelfth, several ulcers soundly healed, and the remaining ones became clear and covered with healthy granulations. Of accessory phenomena, there were observed a kind of intoxication, drowsiness, rigor, and slight elevation of temperature. These symptoms made their appearance on the fourth day of the treatment, shortly after the injection of $1\frac{1}{25}$ grain. They disappeared spontaneously the next day.—*Brit. Med. Jour.*

SURGERY.

HARDENING PLASTER.

M. Julte has recently communicated to the French Academy of Sciences a process of hardening plaster so as to adapt it to the construction of flooring in place of wood, and to other purposes for which it cannot be used in its ordinary state, on account of its want of hardness and resistance to crushing. It is effected by intimately mixing six parts of plaster of good quality with one part of finely sifted, recently slaked white lime. This mixture is employed like ordinary plaster. After it has become thoroughly dry, the object manufactured from it is saturated with a solution of any sulphate whatever whose base is precipitated in an insoluble form by lime. The sulphates best adapted for the purpose, from every point of view, are those of iron and zinc.

With sulphate of zinc, the object at first greenish, finally assumes through desiccation the characteristic tint of the sesquioxide of iron. The hardest surfaces are obtained with iron, and the resistance to breakage is twenty times greater than that of ordinary plaster. In order to obtain a maximum of hardness and tenacity, it is necessary to temper the limed plaster well in as brief a space of time as possible, and with no more water than is strictly necessary.

The plaster cast, or other object to be hardened, should be very dry, so that the solution employed may penetrate it readily. The solution should be near the point of saturation, and the first immersion should not exceed two hours. If immersed too long, the plaster would become friable.

The proportions of the lime and plaster are arbitrary, and may be varied according to the results to be obtained; nevertheless the proportions of one to six have given the best results.—*Sanitarian.*

TREATMENT OF ENURESIS.

Dr. Sänger, of Leipsic, recommends a course of systematic dilatation of the urethra in cases of enuresis both in women and female children. His plan is to introduce a metal catheter well into the bladder, keeping the thumb over the aperture. The instrument is then firmly pressed backwards and to each side from eight to a dozen times. It is, of course, useless to make any pressure anteriorly, as the pubes lie immediately in front. Ten or twelve sittings are usually sufficient. During the treatment the patient is desired

to control the sphincter as much as possible by means of the will, to take but little to drink and to keep the abdomen warm. The good effects of this mechanical system of treatment are to be ascribed to increased power gained by the sphincter in consequence of its contractions after dilatation and stimulation. This method is useful where the paralysis is of central as well as where it is of peripheral origin. Where, however, the neck of the bladder and the whole urethra are of very large calibre, it is useless, and in such cases a plastic operation is required.—*Lancet.*

THE ETIOLOGY, PROPHYLAXIS AND THERAPEUTICS OF HÆMORRHAGES AFTER TONSILLOTOMY.

Although hæmorrhages following excision of the tonsils are of rare occurrence, they are of great interest to surgeons. The majority of patients are adults, in whom the hæmorrhage is due to the fact that the incised blood-vessels fail to retract and contract properly in the indurated tonsillar tissues. The bleeding never results from injury of the carotid artery, as was formerly believed, but comes from the enlarged tonsillar branch of the carotid or the ascending pharyngeal, from the pterygo-palatine artery, or from the ascending palatine in cases where the latter vessel is abnormally situated. Usually, however, the hæmorrhage is not arterial, but of parenchymatous character. It can be easily understood that in persons suffering from hæmophilia, tonsillotomy may give rise to an uncontrollable hæmorrhage.

As regards the prophylaxis, care should be taken in the performance of tonsillotomy not to draw the tonsils too far forward between the faucial pillars, because the surrounding folds of mucous membrane, and the vessels at their point of entrance in the tonsils, are exposed to injury. These accidents are most likely to happen if guillotine-shaped tonsillotomes or scissor-formed instruments are used. Especial care should be taken not to operate in the acute stage of inflammation, or in marked tonsillar hypertrophy, because these conditions favor the occurrence of secondary hæmorrhage. For the same reason the surgeon should content himself with excising only that portion of the tonsil which projects beyond the faucial pillars, the more so since the remaining part usually undergoes spontaneous shrinkage.

If a severe hæmorrhage occurs we should make use at first of styptics, which, in conjunction with compression, are usually sufficient to arrest the bleeding. The application of ice is an excellent hæmostatic. If these means fail, we resort to cauterization with nitrate of silver, or better still the Pacquelin cautery. In the severe cases ligation of the common carotid artery has been successfully performed. As a final resort, tracheotomy with tamponing of the pharynx may be entertained. Experience has shown that severe hæmorrhages are frequently arrested by the occurrence of vomiting or syncope, and these conditions may be artificially produced for the same purpose.—Dr. O. Von Holst in *Oest.-ungar, Centralbl f. d. Medicin. Wissenchaften, No.* 11, 1891.

COCAINE IN URETHRAL SURGERY.

In December, 1886, Dr. W. Frank Glenn, of Nashville, Tenn., introduced a bulbous bougie in a patient on whom he had cut a stricture three inches from the meatus; also enlarged the meatus. He prepared a fresh 8 per cent. solution of muriate of cocaine, and injected a small quantity (without measuring,) into the urethra. Ten seconds had nearly passed when patient excitedly asked, "Will that put a man asleep?" Dr. Glenn answered, No; that its effect was only local. By this time the patient was unconscious, muscles jerking, eyes rolling upward, mouth frothing, and every few seconds entirely ceasing to breathe. He was thoroughly and completely poisoned by the cocaine. It required the active work of three other physicians and himself one hour and fifteen minutes to prevent death. At last, however, he began to breathe naturally, and soon returned to consciousness without any ill effects whatever resulting therefrom. He then resolved to use cocaine (of any strength) no more on a recently cut or denuded urethra. He has since had no unpleasant results until September 24th, 1890. Seeing that Glück regarded a mixture of cocaine in a weak phenol solution as entirely void of any danger, he again tried it in a urethra which had been incised at the meatus just forty-eight hours previous.

The solution was prepared after Glück's formula with the exception that instead of adding ten grains of cocaine to the drachm, he only put two and one-half grains. He took a small quantity in a syringe and injected into the urethra, not holding it in, but allowing it to escape immediately. He turned to his instrument case, and immediately the patient raised up and asked, "What is this?" and fell back, going at once into the regular cocaine spasms, from

which in twenty or thirty minutes, Dr. Glenn feared he would lose his life. The symptoms were exactly those of his former patient, though not lasting so long.

These two experiences, with one other, in which the effects were well marked, but not alarming, will cause him to be very careful in the use of cocaine on absorptive surfaces. In the mildest case of the three, the urethra had not been incised at any point, but was ulcerated, and bled upon the slightest touch with an instrument.

From these cases, he draws the following conclusions:

1. Cocaine is a most potent and wonderful local anodyne, but not void of danger.
2. Its use should be positively forbidden in the recently cut or denuded urethra.
3. Prepared after the manner of Glück (with phenol), it is equally unsafe to apply to the abraded urethra.
4. The use of cocaine in the urethra is attended with more risk than when applied to any other part of the body.—*South. Pract.*, April, 1891.

TREATMENT OF SUPPURATIVE PANOPHTHALMITIS.

Boé (*Annales d' Oculistique*, January and February, 1891) gives the results of some further investigations which he made in order to ascertain the advisability of enucleating a suppurating eyeball. At the International Medical Congress last year, he read a paper in which he came to the conclusion that it was not expedient to enucleate or eviscerate a suppurating eyeball. He considers that the further investigations which he has made strengthen the opinions which he expressed at Berlin. In his earlier experiments he injected blood taken from a body several days after death into the vitreous of rabbits. This was followed by suppurative panophthalmitis and death. The *post-mortem* appearances were not very marked. White lines bordered by a reddish zone were observed on the surface of the liver. Microscopic examination revealed dilated capillaries plugged with streptococci. There was no appreciable meningitis, and no metastatic abscesses were discovered. It has not yet been shown that the streptococcus is the only or chief agent in all intraocular suppurations, and it is impossible to diagnose whether the inflammation in any given case is due to a microbe or not. The author is of opinion that all cases should be treated as if they were microbic in origin. He is strongly opposed to enucleation or evisceration in suppurating panophthalmitis. He recommends that when the pain becomes intolerable a free incision should be made into the eyeball, and the purulent contents evacuated. He objects to enucleation or evisceration on the grounds that either of these operations opens up numerous paths along which microbes might enter the system. He found in his experiments upon rabbits that general infection was more likely to occur if excision were performed soon after suppuration was established. Delay in operating lessened this danger, and for this there might be two explanations: either that the activity of the microbes had diminished, or that the veins and lymph channels had become plugged, and the entrance of the microbes into the general circulation was impeded.—*Brit. Med. Jour.*

"GUTTA-PERCHA PAPER" IN ULCERS OF THE LEGS.

Dr. Vasily P. Kürtchinsky, of Nejin (*Vratch*, No. 35, 1890), speaks highly of the so-called "gutta-percha paper" as the best means of rapidly curing even the most intractable ulcers of the leg. The diseased surface should be first carefully washed with a 4 per cent. boracic acid solution, and then gently dried with a piece of absorbent cotton-wool, after which a sufficiently large sheet of the "gutta-percha paper" (previously washed in the solution and dried between towels) should be applied, covered with a thin layer of cotton-wool, and lightly fixed by means of a muslin roller. The dressing should be changed every day. Under such simple treatment the ulcers are said to heal soundly in about five days in more or less recent cases, while those of older standing and greater severity are cured in two or three weeks. Pain, heat, tension, and disagreeable subjective sensations subside almost immediately after the first application. Similar excellent results are also obtained in all cutaneous affections which are characterized by an intense local irritation, such as dermatitis of various kinds, acute or chronic eczema, erythema, erosions or fissures, etc. The author adds that the application of Martin's india-rubber adhesive plaster is followed by identical beneficial effects. This material, however, is a good deal more expensive than gutta-percha paper. In either case the curative action must be attributed mainly to the powerful sedative and protective properties of the dressing material.—*Brit. Med. Jour.*

A HAIR-PIN IN THE NOSE.

Dr. Joseph C. Roth, writes in the *Medical Record* that on January 28, 1886, while he was doing night duty at the Out-Patient Department of Chambers Street Hospital, New York City, a policeman brought in his daughter, stating that she had a hair-pin up her nose, and that a physician had tried for an hour to remove it. Upon questioning how the accident happened, she said she had dry nasal catarrh, and frequently used the curved end of a hair-pin to loosen the crusts. On the evening of January 27th she attempted to cleanse her nose as usual, and introducing the pin too far, it eluded her grasp; all attempts at its removal merely seemed to push it still farther into the nose. On examination he found a hair-pin in the right nostril, the two points embedded in the mucous membrane of the bony septum and turbinated bone. He attempted extraction with forceps for some time, but being unsuccessful, and producing quite a free hæmorrhage, he wrapped cotton about a nasal probe, and pressing it against the inner side of the distal or curved end of the hair-pin, pushed it as far into the naso-pharynx as possible. He then, with his index and second fingers passed through her mouth and upward, back of palate, grasped the curved end of the hair-pin, and extracted the same through the mouth.

By removing the pin in this manner he was able to avoid all injury to the nose and throat, save what he had done while attempting its extraction through the anterior nares. The hair-pin was of the ordinary shape and size, measuring two and a half inches doubled, or about five inches from end to end.

GYNÆCOLOGY.

ENDO-UTERINE THERAPEUTICS.

Dr. More Madden in a paper on the above subject said, with regard to the methods of modern intra-uterine treatment and the conditions by which this is called for, his observations are founded on a clinical experience extending over many years, and embracing upwards of ten thousand gynæcological cases treated in his wards or in the extern department of the Mater Misericordiæ Hospital, Dublin. Of the cases admitted into those wards during the last fifteen years, endo-uterine treatment was found necessary in 35 per cent. The two essential points in all such treatment, are—first, that the orifice and cavity of the uterus, if not already sufficiently dilated, should be mechanically expanded; and secondly, that whatever application is resorted to should be brought into direct contact with the diseased endometrium. For the first purpose the slow, painful, and hazardous methods of dilatation by sponge or laminaria tents have been long abandoned by Dr. More Madden, who employs in their stead the rapid cervical dilator which Messrs. Arnold have brought out in accordance with his suggestion, and which he finds more effective and quicker in its action than Hegar's or other similar dilators. The second object is especially necessary as a preliminary to endo-uterine treatment in cases of congestive hypertrophy and chronic subinvolution, in which the lining membrane of the uterus is commonly overlaid by an inpervious pseudo-membranous albuminoid neoplasm envolved from the proliferating celia of the diseased surface. Or else the endometrium, in many cases, is so thickly bathed in the tenacious morbid secretion therefrom, as effectually to protect the underlining tissues from the action of any remedial agent introduced into the uterine cavity until that pseudo-membrane and secretion are removed by the curette. For these objects Dr. More Madden recommends, firstly, the use of Duke's cervical curette to cleanse out the entrance to the womb; and secondly, the employment of his own Adjustable Uterine Curette, by which the endometrium may be thoroughly denuded, and at the same time by the hæmorrhagic discharge thus occasioned the congestion of the hyperæmic and hypertrophied organ may be most effectually relieved.

In the treatment of subinvolation the author advocates the introduction, in some instances, of a small tampon saturated in a combination of tannic acid and turpentine, which he termed "Tanno-terebinth." This acts as an immediate stimulant and astringent on the uterine structures, and in suitable cases is allowed to remain in the cavity from 12 to 24 hours, unless sooner expelled from the then generally much contracted uterus. The vaginal glycerine saturated tampon commonly employed in cases of this kind, although unquestionahly serviceable in many instances, is messy and troublesome in its use both to patient and practitioner, and hence for some time past the writer has generally adopted the boric acid, or "dry treatment," recommended recently by Dr. Duke, and which he has found generally very satisfactory as a substitute for the older method of treatment. He also strongly

deprecates the employment of the ordinary syphon syringe for any endo-uterine purpose, and believes that this should be replaced by an irrigator such as the one he suggested many years ago, and which, having been since appropriated by others, without any acknowledgment is depicted in the paper of which this is an abstract. The foregoing measures must, however, be supplemented by more active agents in those more serious cases of long standing, fundal or corporeal endometritis and subinvolution, in which the disintegrated and eroded endo-uterine mucous membrane becomes the seat of various pathological changes, extending to the submucous structures and utricular glands, and often associated with those so-called fungosities resembling papillary epithelioma, which, if checked, may ultimately degenerate into that condition. In such cases it is that the cautery, actual or potential—the first in the form of igni-puncture, and the latter in the shape of stronger caustics, acid, nitrate of mercury, fuming nitric acid, or chromic acid, &c.—may be justifiably resorted to in endo-uterine treatment. In conclusion, Dr. More Madden briefly detailed the result of his clinical experience of these various applications, the circumstances that indicate their use, the dangers that may attend their abuse, and the methods of their employment.

It was also thought, in selecting dilators for use, the amount of dilatation required should be considered. In some cases it is only necessary to dilate to a small amount to admit a curette; in other cases a large amount of dilatation is required to admit the finger to explore the uterus. He wished to know in what case of chronic intra-uterine disease Dr. Madden recommended intra-uterine douching with hot water. After labor or abortion, or operations on the interior of the uterus, it is frequently done, but in these cases the cervical canal is patulous. In chronic cases the cervix should be kept in a state of sufficient dilatation to admit a Boazman's catheter, if uterine douching were carried out daily, as recommended by Dr. More Madden. As to the use of caustic, the most important point was to apply the caustic directly to the mucous membrane, which is frequently very difficult on account of the mucous secretion filling the uterus and cervical canal.—*Med. Press.*

PRURITUS ANI AND VULVÆ.

Dr. Augustin Gœlet (*Archives of Gynæcology, Obstet., and Pædiat.*, March, 1891) disparages the treatment of pruritus by simple application of any lotion. The vagina, he insists, should be daily cleansed with a solution of peroxide of hydrogen (1 part to 3 of water), best administered as a spray. The parts being dried with absorbent cotton, the whole vagina and vulva shouid be dusted with Squibb's pure boracic acid in fine powder. The neighborhood of the anus is, in cases of pruritus ani, to be cleansed with spray, dried and powdered in the same manner. The parts must not be washed with soap. After dusting the vulva and vagina, the medical attendant must place a thin layer of absorbent wool, which has been dusted with the same powder, between the folds of the labia and majora and between the nates, close to the anus and perineum so as to prevent the contact of two irritating surfaces. The wool must be changed directly it becomes moist. Dr. Gœlet says that the above treatment will effectually relieve the pruritus, but cannot prevent its return, as it does not cure the cause. Discharge from the vagina frequently causes pruritus ani in women, though the possibility of discharge from a fistula or some other rectal disease must not be overlooked. Pruritus vulvæ is most frequent in pregnant women with chronic endometritis and extensive erosion of the cervix. A few applications to the cervix of Churchill's tincture of iodine (which should be five times the strength of the ordinary tincture) every third day, and a douche twice a day of a solution of creolin, will frequently effect a speedy cure. The most prompt and effective method of treating endometritis, as well as erosion of the cervix, is by galvanic applications to the uterine canal, or to the cervix alone when the disease is confined to that part. Dr. Gœlet makes the above observations in a notice on a lotion recommended as a remedy for pruritus in the *Canada Medical Record.* The lotion consists of hypophosphite of sodium 1 drachm, carbolic acid half a drachm, glycerine 1 ounce, and Listerine 3 ounces.—*Brit. Med. Jour.*

OBSTETRICS.

RETENTION OF AN ALMOST FULL-TERM PLACENTA FOR TWO MONTHS.

In the *Indian Medical Record* of last month the editor, Dr. James R. Wallace, relates a very interesting case of retention of a placenta for nearly two months without any unfavorable symptoms supervening. The

facts are peculiar. He was called to attend a woman during her second delivery, which had come on at the eighth month. He found the head low down in the pelvis, and the expulsion of the child terminated naturally. While waiting for the uterine contractions to expel the placenta he received an urgent message, and left the midwife to see to the after-birth. He did not visit the patient again, but about two months afterwards he was called, to find her in great pain. There was some hæmorrhage, and on examination the uterus was as large as a child's head. The os was somewhat dilated, allowing two fingers to pass which touched a fibrous mass, found to be the placenta. On inquiry he ascertained that the midwife, finding that the after-birth did not come away within an hour, concluded that probably "everything had come away," and forthwith applied a bandage. The discharge ceased in about ten or twelve days, and the woman got up, going about her work without any discomfort, pain, or sense of weight. On applying compression over the fundus uteri, the placenta, quite fresh in appearance and without fetor, was expelled.—*Lancet.*

DOES ONE ATTACK OF PUERPERAL FEVER PREDISPOSE TO SUBSEQUENT ATTACKS?

Dr. B. E. Kings, (*Mass. Med. Jour.*) after a somewhat exhaustive and painstaking search in connection with this subject, is forced to say that in no work has he found a single reference made to the liability of puerperal fever to recur. His experience leads him to conclude that an attack of puerperal fever predisposes to subsequent attacks, and he attempts to substantiate this statement by the report of several cases gleaned, not only from his own practice, but also from the practice of others who were competent to diagnosticate puerperal fever.

He reports the cases of six women who between them have had fifteen attacks of puerperal fever. He asks: What is the cause of the recurrence of the fever? Does the poison remain latent in the system, ready to break out at any favorable moment? To this he cannot concur, knowing the rapidity of the action of septic poison, knowing that it will not remain dormant, and that it is not recognized as a chronic disease.

He also asks: Can there remain a low form of inflammation of the peritoneum that at the slightest provocation the inflammation is rekindled or are adhesions disturbed by changes that take place during pregnancy and confinement? In regard to old peritoneal trouble breaking out afresh, we all know how careful we have to be in operating in cases of old pelvic cellulitis, but still we must look further, for, in the only case in which he had a chance to observe the condition after death, no such adhesions were found.

Can the nervous system have a hand in the renewal of the fever? He says he can readily believe that a woman with a delicate nervous organization, under adverse circumstances, might be thrown into a condition favorable for the lighting up of a fever, as seen in one of his cases.

TUMORS OF THE DECIDUA.

Professor Sänger (*Centralb. f. Gynak.*, June 13, 1891) has collected a considerable number of cases of "deciduoma." A perfectly innocent form exists, which must not be mistaken for inflamed and degenerate relics of decidua left adherent to the uterine walls. Sänger and Chiari have observed a malignant deciduoma which gives rise to metastases—a true sarcoma of the decidua, in fact. Foul discharge and hæmorrhage follow delivery, and death occurs within six or seven months, after symptoms of disease in the bones, lungs, and other organs. The metastatic deposits in the lungs resemble decidua, bearing the characteristic cells. In the discussion on Professor Sänger's paper (reported in the *Union Medicale*, June 2), Dr. Müller stated that he had seen a case where masses of decidua-like tissue were found in the uterus and metastatic deposits developed in the vagina, abdomen, and nates. Dr. Veit believed that these cases were simply instances of pregnancy during cancer of the uterus.—*Brit. Med. Jour.*

PATHOLOGICAL ANATOMY OF ECLAMPSIA.

In fifteen cases of eclampsia, Schmorl (*Centralblat fur Gynakologie*, No. 29, 1891) found necroses in the liver in almost every case. He divides them by their microscopic and macroscopic characteristics into hemorrhagic and anæmic, the first being much the more frequent. In five cases in which the heart and pancreas were also examined, necrotic patches were found mostly anæmic in the pancreas, mostly hemorrhagic in the heart. In the kidneys there was invariably more or less of a degenerative process to be seen in the epithelium, and frequently hem-

orrhages along the boundary line of the cortex. In almost all the cases hemorrhages could be discovered in the brain, some macroscopic, but most microscopic. Pathological conditions were also found in the blood-vessels. There were numerous ruptures of smaller vessels which the writer ascribed partly to the compression of internal organs by the muscular spasms, partly by the contraction of the vessels themselves which accompanied the convulsions. There was noted, moreover, a separation of the endothelium in good-sized shreds, which led to embolic obstruction of the vessels. This was also favored by the rupture of small vessels and the entrance into the circulation of parenchymatous cells. There were found not only emboli of liver-cells, as observed previously by Jürgens and Klebs, but also indubitable renal cells, and cells of placental origin in the circulatory system. The presence of these cells not only stopped up small vessels, but also gave rise to thrombus formations and consequently to grave disturbance of the circulation. The whole pathological picture, says the writer, points to some poison in the maternal blood. Curiously enough, he would ascribe this poison to the decomposition of the parenchymatous cells within the blood; instead of giving the obviously correct view, that the poison emanates from the fœtal body and is not excreted because the maternal kidneys have become, from some cause, insufficient to do their work of excretion.—*Univ. Med. Mag.*

PÆDIATRICS.

TREATMENT OF HYDROCEPHALUS.

Broca says (*Rev. Mens. des Mal. de l'Enf.*, March, 1891,) there are some cases of this disease in which surgery is powerless. Thus, when one finds post mortem that a subject had tubercle or a neoplasm of any kind in the cerebellum, or the cerebrum, which, by compression, had caused an effusion of fluid, it is certain that no surgical procedure would have been of any benefit whatsoever. The external cause of pressure might be removed and the symptoms be relieved for a time, but the initial cause would remain. There are cases, however, in which so serious a cause is not present, and which under previous conditions of surgery have been looked upon as hopeless. At the present time it is believed that for some of these cases relief can be obtained by the evacuation of the intracranial fluid. A cure may not result, but improvement may occur. Such a result might be hoped for in cases in which the condition was of syphilitic origin. Before the antiseptic era, the results of puncture in these cases were bad. One was afraid to trephine, and if a trocar were used it was more than likely to be septic, and in a few days the result would be death from suppurative meningitis.

At the present time the cranium, the meninges, and the brain itself all show extreme tolerance to aseptic instruments, and Keen has proposed measures for the drainage of the cerebral ventricles. Clinical and anatomical investigations have led Keen to the conclusion that the surest way of entrance to the distended lateral ventricle and the best track for drainage was by a lateral opening, the crown of the trephine being applied three centimetres behind and three centimetres above the external auditory meatus. The brain should then be perforated by the trocar, the latter entering from three to six centimetres above the external auditory meatus and penetrating directly to the ventricle. No injury could be done by such wound to any vital portion of the brain. Keen has thus operated in three cases, Mayo Robson in two, and Thiriar in one. The author has also found the method one of extreme ease and rapidity. The ventricle should not be at once emptied, but progressively, and Keen recommends the use of a horse-hair drain. The brain will bear such an injury, and the drain may be left in position several days. Keen even advises irrigation of the track and the ventricles with boiled water, and in one case after an interval of several days trephined on the opposite side of the skull, put in a drain, and established thorough drainage. The patient died, but there was no evidence of inflammatory reaction about the wounds.

The principal danger in all the recorded cases seems to have been from the too rapid evacuation of the cephalo-rhachidian fluid; in the first of Keen's cases death did not occur until the forty-fifth day, and then was attributable to a tumor of the cerebellum. In another case death followed within a few hours of the operation as the result of a unilateral tubercular meningitis. In order to produce a cure in certain cases of congenital hydrocephalus it will be necessary to operate early, before the fontanelles have closed. The author has operated, however, in one case in which the child was three and one-half years old. The five months which have elapsed since the operation have shown marked improvement in the child's physical condition, but the author does not speak

hopefully concerning his intellectual future. Mayo Robson also punctured an acquired hydrocephalus in a child ten years old, the wound being closed without drainage. All the bad symptoms disappeared, and the child to all appearances made a complete recovery.—*Archives Pædiatrics.*

TETANOID CONVULSIONS IN AN INFANT; OPERATION; RECOVERY.

Ronaldson (*Canadian Practitioner*) recently reported a case that arose when the child was nine days old. It was considered to be one of tetanus, whose starting-point seemed to be the neglected or badly-taken-care-of umbilicus. At first the convulsions were confined to the left side of the body; restlessness led on to tonic muscular contraction, and that was succeeded by well-marked clonic convulsions. Between the attacks the child was apparently well. The convulsions increased to the number of 204 in the twenty-four hours, while during their occurrence the tongue became blue-black, and at times well-marked opisthotones supervened. On one occasion they were never absent for one whole hour, and for a period of nine hours the child was unable to suck, in consequence of the frequency of the fits. When they did not come too rapidly, it took its nourishment greedily. They varied in frequency from about 100 to 204 in the twenty-four hours, but not in such a way as to warrant us in believing that treatment, local or general, had any beneficial effect.

Dr. Brakenridge, who saw the child, and subsequently confirmed the diagnosis, gave it as his opinion that the convulsions were not due to any disease originating in the brain, but that they were peripheral in their origin, and probably had the umbilicus as their starting-point.

Excision of the umbilicus was performed, and at once there was improvement, and the fits gradually decreased.

They returned later in a lesser degree, but were controlled by sulpho-carbolate of soda, and the child perfectly recovered. Microscopic examination of the excised umbilicus did not detect any special organism in it.

NOCTURNAL ENURESIS.

A correspondent of the *Lancet* advises for this trouble that the old-fashioned remedy of a birch-rod be employed shortly before the boy is put to bed, six not severe strokes repeated for two or three nights at the outside will effect a cure. The birching should be regarded by all parties not as punishment for the past, but as treatment for the future —a very different thing. The *rationale*, he thinks, is (1) that it wakes up a desire to avoid wetting the bed; (2) that it draws the blood to the surface for a few hours, and thus relieves the pelvic organs; (3) that it stimulates the lumbar centre, controlling micturition through the nerves distributed to the upper gluteal region; and (4) that it prevents the patient lying on his back.

HYGIENE.

THE PREVENTION OF THE SPREAD OF CONSUMPTION.

Dr. Samuel G. Dixon, in his address before the State Board of Health of Pennsylvania said: As there is nothing that affects the wealth and happiness of the people of this great State more than ill-health, and as there is no one poison that interferes more with health than tuberculosis, which not only too often robs us of those in the prime of manhood and womanhood, but renders thousands upon thousands a burden to themselves and their families for years, yet it is happily a preventible disease, and this Board should be armed with authority and means to enforce and carry out sanitary laws essential to that end.

To accomplish this most important. work it must be evident, after what we have reviewed this evening, that you should have legislation regarding the disinfection and destruction of tuberculous material, especially human tuberculous sputum.

There should be a law compelling passenger transportation companies to furnish receptacles containing either water or a germicide for sputum, both in their cars and stations. The same law should apply to all places where large numbers of persons gather together either for the purpose of work or amusement.

To enforce the expulsion of dust in our factories and workshops.

To compel the thorough sprinkling of the public highways immediately before cleansing.

To forbid spitting on the sidewalks.

To compel the draininge of damp soils before permits for building dwellings are granted.

Rules should be formulated for air space and ventilation of all buildings, and the builders and architects required to submit their plans and specifications before the

work of building can be commenced. This certainly is quite as necessary and practicable as the present law in Philadelphia and other cities regarding plumbing.

Not only must we have a law requiring a certain air space and ventilation in our buildings, but also around our dwellings, workshops, etc.

The width of all new streets and passageways should be of a sufficient breadth. Every block of buildings should have a complementary garden or park. Every building should be accompanied by a certain air space.

Such topographical regulations must be insisted upon in our growing cities, if we mean to reduce the present alarming death-rate and suffering from phthisis.

This ventilation of our cities and towns by the laying out of wide and diagonal streets and reservations of open spaces for gardens and parks, is essential for the successful ventilation of our buildings.

A pure and constantly renewed atmosphere is requisite for the prevention of consumption. This is well known and universally admitted beyond doubt or controversy.

All knives, forks, spoons, cups, and other eating utensils should be thrown into scalding water immediately after using, otherwise the tuberculous sputum will be carried from one person to another.

Dentists and physicians should be required to disinfect their instruments according to a law of the State, and be subject to inspection and a heavy fine for a violation of the same.

The cleansing of all public conveyances should be regulated by law.

We should have laws regulating the ventilation of our animal stables. Cows, like men, require physical exercise and pure air and light to enable them to resist tuberculosis.

The hot, close, dark and dirty stables throughout our State are important factors in promoting tuberculosis in our cattle; therefore, regulations should be formulated for ventilation, light, and cleanliness of animal sheds and stables. These should be under the inspection of competent and honorable inspectors.

Soiling of cattle should be forbidden by law.

As there are at present so many cows predisposed to tuberculosis, and as it is more than probable that interbreeding intensifies predisposition, it should be defined and forbidden.

All consumptive animals should be condemned and killed after having been valued and paid for by the State. The vending of the meat of such animals should be made criminal.

At present cows suffering with this disease are constantly being sold in our markets for the manufacture of mince-meat and sausages.

The breeding of tuberculous animals, the killing of which, at any time, should be delayed for the want of a sufficient appropriation to pay for the same, should not be permitted.

The sale of the milk of such animals should be forbidden under a heavy penalty.

As tuberculosis, actinomycosis, lymphadenomo and rheumatism with enlargement of the joints would frequently be taken the one for the other by the laymen, competent government inspectors should be appointed to make periodical and special inspection of all home cattle as well as those about to be brought into the State.

All butter and milk imported into the State should be subject to inspection for tuberculous material. All meat exposed for sale in our markets ought to be subject to inspection and condemnation.

The law should require physicians to report tubercular cases.

The proved transmissibility of tuberculosis from one person to another brings us face to face with the necessity of considering the question of admitting to our country tuberculous immigrants.

MEDICAL CHEMISTRY.

QUINA LAROCHE—A PERFECT WINE OF CINCHONA.

This celebrated French proprietary is said (*Bulletin de la Société Royale de Bruxelles*) to be prepared as follows:

Macerate 100 gm. quinquina succirubra coarsely powdered, for thirty minutes, in 100 ccm. of boiling water. Strain off the liquid and set aside. Macerate for several hours the residual magma in 1,000 gm. Malaga wine, and again strain off the liquid and set aside. Finally, macerate the magma in 500 gm. alcohol of 50°; strain off, and wash the residue with a little water to recover all the alcoholic tincture. Unite all the liquids, let stand for twenty-four hours, and filter.

To the filtrate add 800 gm. loaf sugar with the aid of a gentle heat, and again filter. The product is the *Vin de Quina Laroche.*

The *Vin de Quina Ferrugineux Laroche* (ferrated wine of cinchona, Laroche) is prepared by dissolving in 1,000 parts of the above wine 1 part of citro-ammoniacal pyrophosphate of iron.

THE COLOR OF OXYGEN.

Till now oxygen was believed to be as colorless in the liquid form as it is in the gaseous. But the Polish chemist, Olszewski, shows that it is only because thin layers of it have been examined that liquid oxygen has been believed to be without color. He has succeeded in getting a layer of it 30 millimeters thick, and he finds that it has a bright sky-blue color. The discovery is very important in point of view of the absorption spectrum of oxygen.

REGREENING OF PEAS AND BEANS WITH SALTS OF COPPER.

According to the *British Medical Journal*, the Health Committee of Glasgow have notified the dealers in colored peas that they will institute proceedings for the sale of such articles, whenever the circumstances are sufficient to warrant a prosecution.

The medical officer of health, in a report to the Health Committee, says: "The process of regreening is essentially fraudulent in its intention and commercial results; that regreening with sulphate of copper certainly does not make vegetables more wholesome—probably always makes them less wholesome, and in some proportions undoubtedly does so; and the public ought, in purchasing preserved vegetables, to ask for ungreened, or at least for vegetables free from copper."

The report then gives the history of this industry in France, the seat of the practice, showing that since 1853 the practice has been prohibited in Paris, and since 1860 throughout France; that commission after commission have reaffirmed the decision, until in 1889, when the Consulting Committee of Hygiene adopted a report of M. Grimaux to the effect that "in the position of our information as to the noxious influence of salts of copper, there is no ground for prohibiting the practice of regreening with salts of copper."

There is a law in Germany against the coloring of food-stuffs, as also in Massachusetts; and as the French government have finally yielded to the wishes of the manufacturers, the consumers must now look out for themselves.

NEWS AND MISCELLANY.

PROF. J. C. WILSON.

Dr. James C. Wilson was elected by the Board of Trustees of Jefferson Medical College to the chair of practice of clinical medicine, to succeed Dr. J. M. Da Costa, who resigned last Spring.

MEETING OF TRI-STATE MEDICAL ASSOCIATION OF GEORGIA, ALABAMA AND TENNESSEE.

The third annual meeting of the Tri-State Medical Association of Georgia, Alabama and Tennessee, which will be held in Chattanooga Tuesday, Wednesday and Thursday, Oct. 27th, 28th and 29th, at Turner Hall, Nos. 616 and 618 Cherry Street.

DR. FRANK TRESTER SMITH,
Secretary.

SEVENTEENTH ANNUAL SESSION OF THE MISSISSIPPI VALLEY MEDICAL ASSOCIATION.

In the preliminary announcement of the programme for the seventeenth annual session of the Mississippi Valley Medical Association, to be held in St. Louis October 14th, 15th, and 16th, 1891, nearly fifty papers on various topics of interest to the general practitioner are listed to be read.

A regular classified programme will be issued and sent to members and the profession generally at an early date.

UNION MEETING OF THE DISTRICT MEDICAL SOCIETIES OF NORTHERN OHIO.

The Joint Committee appointed by the following Societies, to hold a Union Meeting of the North Western, the North Eastern and the North Central Ohio Medical Societies, at Mansfield, O., on Thursday, Friday and Saturday, Nov. 5th, 6th and 7th.

On Thursday evening the members will be entertained by a reception given in honor of the Association by the Hon. John Sherman, and on Friday evening by a reception given by the Hon. M. D. Harter. Every arrangement has been made to make this meeting a pleasant and profitable one, and we trust that a full attendance may be had.

Ample hotel accommodations will be arranged for; and an effort will be made to secure reduced rates on all the railroads of Ohio.

The following Committee of Arrangements have been appointed: Dr. R. Harvey Reed, Dr. J. W. Craig and Dr. George Mitchell, all of Mansfield.

AMERICAN PUBLIC HEALTH ASSOCIATION.

The 19th annual meeting will be held at Kansas City, October 20th to the 24th, 1891. The Local Committee of Arrangements announces that all the railway passenger associations of the county, have granted a one and one-third fare rate for the round trip on the usual certificate plan, that is:

(1). Procure a certificate of attendance from the agent at the starting point by paying full fare to Kansas City.

(2). Have the certificate of attendance signed by the proper officer of the Association at Kansas City. This certificate will then procure return ticket for one-third fare. All the leading hotels of Kansas City will give special rates to delegates. Arrangements are being perfected for an excursion into Kansas, as one of the features of the entertainment of the Association. For any information as to the meeting, address

DR. E. R. LEWIS, Chairman, or
DR. JOSEPH SHARP, Secretary.
Local Committee of Arrangements, Kansas City, Mo.

IN PRAISE OF WOMEN.

O woman, in our hours of ease
Uncertain, coy and hard to please,
When pain and anguish wring the brow,
Then none so cheaply pleased as thou!
We've only to submit to take
Hot rhubard tea and anti-ache,
And gizzard oil and ipecac,
And porous plasters on the back,
A flaxseed poultice, catnip tea,
And Quackem's pet discovery,
Hot water bags, and sweats beside,
And camphor nasally applied,
And castor oil and vaseline,
And coals with feathers burnt between,
And soothing syrup, paregoric,
Cold-water cloths and drinks caloric,
And all the housewife's category—
'Tis then we see her in her glory,
Needing, to make her bliss complete,
But mustard plasters on our feet.

C. F. L. in Harper's Bazar.

WHAT ANTISEPSIS HAS DONE.

The generation of surgeons whose medical birth and bringing up date back no more than ten or a dozen years, have little conception of the trials that beset surgeons before the discoveries of Pasteur and Lister and the results that have flowed from them. As little, perhaps, as those of older growth have of the ante-anæsthetic times, when patients were poisoned with tobacco in order to produce muscular relaxation and were strapped to the table to keep them quiet while under the surgeon's knife, and when skill and speed were nearly synonymous terms in recounting the qualifications of an operator. We compare the results now obtained with those of fifteen or twenty years ago and are prone to forget the tremendous advantages we have, and to plume ourselves with scant reason on being better surgeons than we were in those days or than others were before us.

These reflections have been called forth while reading Sir James Paget's "Studies of Old Case Books," to which we have already referred, and observing the fatal course of many cases which nowadays would scarcely be looked upon as in any sense serious or demanding more than ordinary care and attention on the surgeon's part. We may believe that the author's cases could nowhere have received better care than they did in his hands, yet he relates a number of instances similar to the following in which a fatal termination in these days would seem almost inexcusable. The case was one of abscess, which was opened and discharged a large amount of pus ". . . and then the case went on after the usual manner of the time, nearly thirty years ago, and the patient died about five months after the accident, exhausted with suppuration, hectic, blocked femoral and iliac veins and bed-sores."

In almost any surgical work of those times and in the files of old journals the same story can be read. It was not that the surgeons were incompetent, far from it, for there were giants in those days, but because asepsis and antisepsis were unknown and unpracticed. We certainly have cause to congratulate ourselves and our patients as well, or more, that we live and work in the days of anæsthetics and of antiseptics. But who would not give much for a peep ahead to see what surgeons of fifty years hence will be doing, what wonders they will be able to accomplish, and what by us undreamt of methods will then be in daily and hourly use?—*Medical Record.*

A NEW METHOD OF STAINING THE BACILLI OF LEPROSY AND TUBERCULOSIS.

Unna (*Monatshefte für prakt. Dermatol.*, June 1, 1891) proposes a new method of staining the bacilli of leprosy and of tuberculosis. By carrying out the following procedures the bacilli are stained brownish-red upon a colorless background.

1. Stain for five minutes in an aqueous borax-methylene-blue solution (1 : 1 : 100).
2. Wash in water.
3. Iodize for five minutes in a 5 per cent. solution of potassium iodide, containing a crystal of iodine.
4. Wash in absolute alcohol until blue clouds are given off.
5. Differentiate in creasol from a few seconds to a half minute.
6. Fix in rectified oil of turpentine.
7. Mount in balsam (a solution of yellow resin in oil of turpentine).

The method may be modified in the following manner for staining tissues:

1. Stain for five minutes in an aqueous solution of borax-methylene-blue (1 : 1 : 100).
2. Wash in water.
3. Iodize for five minutes in a 5 per cent. solution of potassium iodide.
4. Wash in absolute alcohol.
5. Differentiate from ten to thirty seconds in a solution of equal parts of glacial acetic acid, absolute alcohol and ether.
6. Harden and smooth by immersing in absolute alcohol.
7. Fix in rectified oil of turpentine.
8. Mount in balsam (a solution of yellow resin in oil of turpentine).

Good results may be obtained by omitting the fifth and sixth manipulations.—*News.*

A RUSSIAN PILL FOR ANTI-VACCINATIONISTS.

Riga is a city of some 180,000 inhabitants, comprising 6,500 "orthodox" Russians who object *conscientiæ causæ* to vaccination, and reside in one quarter of the town. Between the years 1882–87 the average mortality from small-pox was 108 annually. From December, 1886, to the end of March, 1887, about four months, there were 155 deaths from this cause, owing to a slight epidemic during that period. Of this number 71 occurred among the orthodox population, equal to 109 per 10,000, while the deaths among the remaining inhabitants only numbered 84, equal to 4.8 per 10,000. Down to the year 1887, as stated above, the average number of deaths annually from small-pox was 108. After this epidemic, vaccination and re-vaccination were largely enforced, with the result that from 108 the annual number of deaths due to this disease fell at once to 8.

MIDWIVES IN TURKEY.

The following is the text of a recent irad promulgated in Turkey, regulating the practice of midwifery. 1.° Midwives who are called to attend upon lying-in-women are held to give the greatest attention to cleanliness; they must wear clean garments, and carefully trim and brush their finger nails and wash their hands. Under no pretext whatever must they keep the soiled linen of lying-in-women, or other soiled objects. 2°. After having trimmed and brushed their nails, and washed their hands, they must employ a disinfectant whose formula has been given to all the pharmacies. 3°. As soon as a widwife perceives symptoms of disease in a lying-in woman, and medical diagnosis shows it to be puerperal fever, the midwife must not attend any other parturient woman, without first having taken baths and changed her underwear and clothing. 4°. Any infraction of these rules will subject the midwife to severe punishment.

And yet some say that the Ottoman Empire is composed of barbarians. Our own Boards of Health could read with profit the sanitary regulations of the sons of Othman.—*St. Louis Med. Surg. Jour.*

ETHER-DRINKING IN NORWAY.

The theory has been more than once advanced that the origin of ether-drinking in Ireland can be traced to the success of Father Mathew's crusade against drunkenness in its ordinary forms. Alcoholic nature, driven out by the pitchfork of his eloquence, returned in a new disguise, and the last state of the victims was as bad as the first. This theory has been called in question, but it receives accidental confirmation from what is at present happening in Norway. As English travelers know, the sale of ardent liquors is, in that happy country, encompassed about with more restrictions than that of the most deadly poisons is with us; temperance, in fact, is the law of the land in Norway, as Lord Eldon declared that Christianity was in England. But, alas! these people made sober by Act of Parliament have now discovered how to get drunk without violating the law. Ether-drinking, according to a

Norwegian contemporary, is becoming quite common in certain districts. The farmers buy it in considerable quantities, especially at Christmas-time and on other festive occasions, and they treat each other and get drunk on ether, as they formerly did on potato or barley brandy. Ether is said to be drunk by young and old men and women, rich and poor, by society belles as a "pick-me-up" after a night's dancing, and by starving wretches, to make them, like Tam o' Shanter, "o'er a' the ills of life victorious." If this be true, it seems to point a moral which perhaps thorough-going temperance advocates have not taken sufficiently into account. Is there, after all, a grain of truth in Byron's thesis (which, by the way, found a scientific supporter in no less a person than Justus von Liebig) that "man being reasonable must get drunk," and can the moderate use of ordinary stimulants be suppressed only at the risk of the evil spirit, which has been cast out, coming back after the house has been swept and garnished, bringing with him seven devils worse than himself? The facts are disheartening.—*Brit. Med. Jour.*

THE POISON OF TOADS AND SALAMANDERS.

The skin of toads and salamanders has lately been submitted to microscopical examination by Mr. Schulz, who finds that there are two kinds of glands present in the skin of these animals, viz., mucous and poisonous glands. The former are present all over the body; the latter are confined to the back of the body and limbs and the ear region behind the eyes; and in the salamander are present at an angle of the jaw. The poison glands are larger than the mucous glands in the salamander, are oval, and have a dark granular appearance, due to strongly refractive drops of poison, a good reagent for which is copper hæmatoxylin. The poison is secreted by epithelial cells lining the glands, and, when the animal is stimulated by electricity, it is exuded slowly in drops by the toad, but discharged in a fine jet, sometimes to the distance of a foot or more, by the salamander. The anæsthetic action of the poison of the toad and the use to which it is put in medicine by the Chinese has frequently been pointed out.—*Monthly Journal of Pharmacy.*

MISTAKES OF A PHYSICIAN.

First—To promise a patient you will cure him.

Second—To promise to call at an exact specified time.

Third—To promise that the malady will not return.

Fourth—To promise that you can render more efficient service than your fellow practitioner.

Fifth—To promise that your pills are not bitter or that the knife will not hurt.

Sixth—To promise that the chill or fever will not rage so high to-morrow.

Seventh—To allow your patient to dictate methods of treatment or remedies.

Eighth—To allow yourself to be agitated by the criticisms or praises of the patient's friends.

Ninth—To allow yourself to buoy the patient when the case is hopeless.

Tenth—To allow yourself to make a display of your instruments.

Eleventh—To allow yourself to experiment or exhibit your skill uncalled for.

Twelfth—To allow yourself by look or action in a consultation to show that you are displeased and that if you had been called first matters would have been different.

Thirteenth—To allow yourself to indulge in intoxicating beverages.

Fourteenth—To allow yourself to rely wholly upon the subjective symptoms for your diagnosis.

Fifteenth—To allow yourself to tell the patient you are perscribing saccharum album when you are giving calomel.

Sixteenth—To allow yourself to give arsenic and quinine when a bread and water placebo will answer.

Seventeenth—To allow yourself to tell Mr. Smith the weak places and irregularities of habit in Mr. Jones' family.

Eighteenth—To allow yourself to give your services or an opinion without a reasonable fee or a reasonable expectancy.—*Kansas Med. Jour.*

EXPERIMENTS ON ANIMALS.

The return made to the House of Commons by Dr. G. V. Poore, the inspector under the Act 39 and 40 Victoria, has just been issued. The report gives the names of all persons who have held licenses or special certificates during the year 1890, and the total number of experiments performed by them. The total number of licensees is 110, of whom thirty-three performed no experiments. There were forty-eight licensing places in thirty-three different institutions in England and Scotland. The return shows that licenses and certificates were granted and

allowed only upon the recommendation of persons of high scientific standing, and that the licensees were persons who by their training and education were fitted to undertake experimental work and to profit by it. The total number of experiments performed in 1890 was 2102, and they are subdivided into the tables according to the nature of the experiments. Thus there were 920 in which the animal suffered no pain, because complete anæsthesia was maintained from before the commencement of the experiment until the animal was killed. In 857 other experiments the pain was trivial, simply a hypodermic injection or inoculation, it being a condition of the certificate granted in such cases that the animal shall be killed if pain result. In 316 cases the animal was anæsthetised during the operation, but was allowed to recover, care being taken to ensure the painless healing of the wounds by antiseptic dressings. The inspector states that in his visits to the various licensed places he has never seen a single animal which appeared to be in bodily pain. "As regards the nature of the experiments, 765 were physiological, 976 were pathological, and 361 were therapeutical or pharmacological. In the domain of pathology investigations have been made concerning tuberculosis, cancer, diphtheria, pneumonia, tetanus, acute necrosis, malaria, lead poisoning, rabies, distemper, grouse disease, anthrax, 'black quarter,' 'pink eye,' &c. In the department of physiology the questions of animal heat, circulation, respiration, secretion, and the action of the central nervous system have been investigated; while among the therapeutical questions which have been here examined are the action of chloroform, morphia, nicotine, salicylic acid, strophanthus, and many other bodies which are new or less widely known, together with investigations into the protective and other powers of bacteria and ferments." Dr. Poore refers to his appointments in the spring of 1890 to succeed Professor Erichsen in the office of inspector, and the appointment in August of Dr. J. A. Russell of Edinburgh as assistant inspector. Dr. Thornley Stoker furnishes the report for Ireland, where three persons hold licenses, and they performed seventy-eight experiments, of which fifty-nine were physiological and nineteen therapeutic.

SHOULD YOUNG DOCTORS WRITE?

When a young man begins his medical career the question sometimes arises whether he ought to write articles for medical journals. The first and instinctive response is in the negative. He has had but little experience, and he cannot possibly add anything to the sum of medical knowledge. But this view of the matter is, in fact, not entirely correct. For, in the first place, the capacity for literary work, and of putting ideas in written words has to be developed early in life. To the vast majority of men writing is a mighty task because the habit was never acquired during the plastic season of youth. If a man does not begin to write before he is forty he will never do it at all. The practice of writing, therefore, though it may be acquired at the expense of a good deal of indifferent work, helps the physician in his maturer years to embody results that are of great importance and interest. There are, as everyone knows, in all large cities a number of medical men of brilliant attainments, large experience—acute, practical, and successful. But they cannot write; and the profession is but little the better for their labors. Usually such gentlemen speak lightly of literary work and do not believe in "rushing into print." As a matter of fact they only do not do it because they cannot.

The kind and amount of literary work which young men can wisely undertake is limited, and this fact should be steadily borne in mind. Reporting cases must be done very little. The case should either be unique in kind or of positive interest therapeutically or pathologically. Experimental work in physiological or pathological laboratories is a kind always open to young men, and almost always gives results in some increment to medical knowledge.

A field of literary labor also in which young men can usually work profitably is that of collating and digesting critically all contributions upon certain subjects. Such articles, if prepared carefully in connection with personal observations, are often of great service to older and busier men.

Many young men make the mistake in pursuing a certain task, of attempting to prove too much or of investigating too wide a field. It is much better to settle a little matter positively and forever, than to bombard a large subject with inconsequential results.

Finally, we would remind young men that therapeutical problems are the most difficult to solve; and that books should never be written by the immature.—*Medical Record.*

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Clinical Lecture.

THE NATURE AND TREATMENT OF ORGANIC STRICTURE OF THE URETHRA IN THE MALE.*

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Gentlemen:—In the ensuing lectures I propose to present a summary of the treatment of organic stricture of the male urethra, as you have seen it practiced by me in this arena. In so doing, I shall confine myself to purely clinical considerations, and shall refrain from entering upon foreign theoretical discussion.

Organic stricture consists, as you know, in a deposit of lymph beneath and around the urethral mucous membrane. This takes place in the form of plates and encircling bands, of varying size, density, and resistance. Its exciting cause is pre-existing inflammation, generally gonorrhœal, and violence or injury. The obstructions or strictures thus formed, by their gradual increase, firmness, and contraction, interfere with the flow of urine, and give rise to urethral and often vesical irritation. Strictures have been variously classified. We have *first*, the *linear*, bridle, cord-like or thread-like stricture; and then the *annular* stricture, more or less broad, varieties of the *ring-like* contraction, which surround the canal and are met with in the most perfect form in the spongy urethra; *secondly*, the resilient or elastic stricture, which, when dilated or stretched, evinces a constant and persistent tendency to contract; *thirdly*, the *irritable* stricture; this is characterized by marked sensitiveness, and pain on the slightest manipulation, with a disposition to bleeding, inflammation, local, vesical, and often general irritation. This irritability may be met with in almost any form of stricture, and in any locality. It seems to depend rather upon an individual sensitiveness than on any special pathological formation. It largely influences the determination and results of treatment, and its existence or development must be carefully watched and respected.

Strictures of *large* and *small* calibre; these terms are of constant application, and are somewhat arbitrarily used. By a stricture of *large* calibre, is usually meant, one with a circumference of more than fifteen or sixteen millimetres, while one below that standard is described as a stricture of *small* calibre. As a rule, strictures of the anterior or pendulous urethra, especially when of long duration, and annular, are resistant to a far greater extent than those of other portions of the canal. In the opinion of Professor Longstreth this condition is due to the fact that the submucous connective tissue of the anterior urethra is more homogenous, and its fibres are more closely felted than in that of the posterior portion. It contains also more connective tissue and fewer glandular elements than the latter, or bulbo-membranous portion, in which the paucity of connective tissue and the preponderance of glandular elements favor a more frequent development of stricture, and at the same time renders it less resistant. Strictures may be *single* or *multiple*. A *tortuous* stricture is the result of two or more neighboring strictures, whose irregular openings and canals collectively form a distorted and twisted passage.

The symptoms of stricture, I need only refer to. Micturition is difficult, imperfect, painful, strained, and usually frequent. The stream is altered, being narrowed, flattened, forked, twisted, irregular, and intermittent, even to drops, with often, a gleety discharge from behind the stricture. There is impairment of propulsive force in the stream,

*First Lecture.—Two Clinical Lectures delivered at the Jefferson Medical College Hospital.

although this can usually be increased by straining, and there is a sense of imperfect voidance of urine, with dribbling, after voluntary urination is completed. Shooting pains in the loins, and limbs, and reflex and sexual disturbances are not infrequent. If severe and deep urethritis occur, more or less suppuration may result, with dilatation of the urethra behind the seat of stricture, rupture, extravasation of urine, abscess and fistula. In other cases, cystitis may follow, with involvement of the ureters and kidneys, and disorganization of the latter.

Stricture most commonly follows gonorrhœa, although it may result from simple urethritis, from masturbation, and perhaps from prolonged and inordinate or ungratified venereal excitement. It is also caused by the application of caustic and irritating agents, by unskilful and rough manipulations, and generally, by traumatism. Its development, I believe, is sometimes favored by extra urethral pressure or hindrance to the flow of urine in micturition, particularly when the urethra is congested or inflamed. Such an impediment may be produced by the corded edge of a pair of drawers, made high in the crotch, and which press externally against the lower wall of the urethra during urination in the erect posture. This idea is strengthened by the alleged rarity of stricture in Oriental nations, who, I have been informed, urinate not in the upright, but in the squatting position. If this be true, stricture, ethnologically speaking, would seem to be more frequent in "him who pisseth against the wall," to use the language of the Old Testament.

As a rule, organic stricture, the result of gonorrhœa, occurs almost always in front of the membranous urethra, and involves the bulbous and spongy portion of the canal. It is rarely met with in the membranous part, except as the result of falls, kicks, and other traumatic violence, in which must be included rough surgical manipulations. It probably never occurs idiopathically in the prostatic urethra. When an organic stricture has once formed, it remains, in a greater or less degree, for life; it is not absorbed, and does not disappear. Yet under proper treatment, the canal, at one time narrowed, may be kept largely pervious, and the stricture may thus be deprived of its malevolence and cease to be a source of annoyance. If neglected, or if after having been once relieved by dilatation in any of its forms or by incision and division, either internal or external, it be left to itself, it will almost certainly recur, and sooner or later, revive the ancient memories of its possessor. I think however, that in all cases, organic urethral stricture, if taken in time, will prove amenable to judicious surgical treatment, and with this object in view, I wish to recall and formularize your clinical experiences of the last few months.

In approaching a suspected case of stricture, the first object of the surgeon, is to arrive at a certain and satisfactory diagnosis. This can best be accomplished by an exploration of the urethra, by means of the acorn tipped bougie with a rectangular shoulder, the bougie a-boule. This instrument may be either flexible, or metallic, but I prefer the former for a first examination. The presence, number, locality, and calibre of the narrowed points, can thus be accurately determined. Their resistance and firmness can be estimated, by means of the slightly conical metallic Thompson's sound. All urethral instrumentation should be conducted under full antiseptic precaution. Every instrument should be thoroughly cleansed with soap and hot water, both before, and after use, and should also, before introduction be dipped in the sublimate solution of 1–1000, or 2000. As an additional precaution, it is well to brighten all steel urethral instruments with a small piece of well used, fine, oiled emory cloth, before boiling and disinfecting them. We can not be too careful in regard to surgical cleanliness in the urethra, and by attention in this respect, you may find, perhaps to your surprise, that very considerable surgical interference can be tolerated, almost with impunity. This increased tolerance has forcibly impressed me, on mental comparison of the results of my urethral operations during the last few years, with those of the period preceding an antiseptic practice.

When inserting urethral instruments, I advise you always to place the patient on his back; and in employing metallic ones, invariably to follow a uniform method. Thus, stand on the left side of the patient, grasp the penis behind the corona with the left middle and ring finger, and with the thumb and index finger, cause the meatus to gape; and insert the point of the bougie or catheter, the shank of which rests over the patient's left groin. Then gently draw the head of the penis and meatus upwards on the instrument, and keeping the point at first downwards so as to avoid the lacuna magna, slowly carry the handle to the middle line of the body, then by a delicate pushing motion advance the point, and at the same time raise the handle of the instrument so that it shall

be at a right angle, or perpendicular to the axis of the body. Its point will then be immediately beneath the pubal arch. Next *raise* the instrument slightly, so as to lift its point towards the upper urethral wall, and prevent it from entering into, and being arrested by the sinus of the bulb. By a continuance of the sliding motion (which should never be intermitted) the point will traverse the membranous and prostatic urethra, enter the bladder, and the handle of the instrument will descend between the patient's thighs. By following this formula, pernicious leverage with the point of the sound is prevented, the danger of bruising or tearing the urethral wall is avoided, and the operator at all times knows exactly where the end of his instrument is. In most cases, the urethra rapidly becomes tolerant of gentle catheterism.

With regard to the character of the stricture, and its size, calibre, or want of dilatability, much has been said, and perhaps the subject has even been somewhat obscured by the very minuteness of classification. Stricture undoubtedly occurs in every degree, from the slightest impediment of the urine flow, to a narrowing, which will not much more than pass a filiform,—strictures of large and small calibre. The gravity of the symptoms is however, often disproportionate to the degree of the stricture, for one of large calibre, if resilient may cause more inconvenience than one which is comparatively tight. It would seem indeed as if the resiliency and irritability of the stricture, its age, or length of continuance, and the amount of involvement of the deep urethra and bladder, rather than a mere degree of tightness, influence its clinical features, and dominate its treatment.

In the *treatment* of stricture, the first and most natural process, is gradual dilatation. It is readily applied, and is attended with comparatively little danger. As Sir Henry Thompson has told us, "it is always to be tried first, because it is the safest and easiest mode." Theoretically it is a perfect procedure, but unfortunately it is not always applicable. How then will you know when to resort to it? This question can be best answered from clinical experience. In strictures occuring near the meatus, and for two or three inches back in the pendulous urethra, the obstruction is usually more or less resistant, and when dilated, by any process, even if largely overstretched, is apt to recur rapidly and obstinately. Strictures occurring in this portion can without doubt, be more efficiently treated, by internal incision or division, or internal urethotomy as it is called. This division of the stricture should be followed by the introduction of straight or curved metallic sounds to prevent recontraction. Internal urethotomy may be effected by the urethrotomes of Maisonneuve or Civiale. The former cuts from before backwards, the latter from behind the stricture forwards. In this Charriere model, the two instruments are combined, it cuts both forward and backwards. Here is the urethrotome of Otis, by which dilatation of the stricturing band is added to its section. Any of these instruments can be safely used in strictures of the anterior portion of the urethra. It must be remembered however, that in cutting from behind forwards, the stricture must first be dilated up to number ten or eleven of the French scale, so as to permit the passage of the instrument, before the blade is sprung.

In advising the division of stricture of the anterior urethra, and especially of the meatus, I must nevertheless, caution you against the indiscriminate and excessive cutting, which has become the fashion of the day. It is unquestionably right to perform meatomy to relieve a mechanical impediment to micturition, or to facilitate the insertion of large instruments for vesical or urethral operations. It must however, always be borne in mind, that the meatus urinarius is a point of normal urethral narrowing. It plays, in this respect, the same part as does the nozzle of a garden hose, which increases the propulsive force of the stream of water. In like manner, the physiological function of the normal meatus is to accelerate, and lend force to the fluid issuing therefrom, be it urine or semen. It is manifest that surgeons should not needlessly disturb, or attempt to improve this arrangement of nature, and should refrain from changing the slit-like aperture of the meatus, into an expanded bell-shaped opening, as too often happens. In this latter condition, dribbling after urination may ensue, and what is perhaps more important, a possible impairment of the life-giving function.

Leaving for the present those anterior strictures which demand and admit a cutting instrument, let me next direct your attention to those deep strictures of really narrow calibre, such as cannot be traversed by an ordinary instrument. These are often spoken of as impermeable or impassible. On this point I will speak positively, and I ask you not to misunderstand me. I do not believe that any idiopathic stricture is ever impermeable. By idiopathic stricture I mean

one which has resulted from urethitis, and not from traumatism or surgical operation or manipulation. Surgical violence, you will comprehend, may readily change an idiophathic into a traumatic stricture. With this limitation, I believe, that in all deep non-traumatic strictures, through which the urine can pass, if only in trickling drops, a filiform whalebone can be carried into the bladder.

I am also certain that over this whalebone, dilating instruments can be guided through any stricture into the bladder, and that the stricture, however tight, can be dilated and by over-distension brought to a comparative cure. as effectively and more safely than by any of the cutting processes. .

I am quite aware that you may read and be told differently, and that you may be led to think that in many cases the stricture may be so tight as to defy all attempts at instrumental passage, and demand division by the knife. Yet I cannot but hope that your observations, in this room, and the testimony of those who have assisted in this clinic for many years, may go to sustain the truth of my assertions. as to permeability and dilatability of these deep, tight strictures.

The instruments necessary for the performance of rapid dilatation, are six or eight capillary whalebone filiforms, a Thompson's dilator, a Gross dilator, and a set of metallic sounds, numbers 20 to 35. For a slower dilatation, to relieve retention the result of aggravated stricture, the same whalebone will be required, also two of double lengths, four or five ordinary English gum catheters, calibre six to twelve French, and an equal number of Gouley's tunelled catheters, beginning with the smallest. The starting point of your manipulations will be the possession of proper whalebone filiforms—filiform bougies as they are often called. Each whalebone should be thirteen inches long, and at its greatest diameter of shaft be so fine that it will readily slide through the number two opening of the French scale. The lower two-and-three-quarter inches should gradually taper until it becomes absolutely capillary, and should terminate in an olive-shaped end or tip.

I advise you to make these instruments yourself. They are essential to your success, and as all those in the market, which I have seen, are coarse, stiff and practically useless, at the risk of being prolix, I will tell you how to make them. A dozen will last a lifetime, for if you know how to insert them nicely, you will not break or destroy them. Buy from your instrument maker a few fine round whalebones †of the thickness of number two French scale. Each length is twenty-six inches, and will therefore make two filiforms of ordinary size. Prepare them thus: Paste a half sheet of fine emory paper on a thin board, then, having cut the end of the whalebone transversely with a sharp knife, place it perpendicularly on the emory and draw it to and fro so as to smoothly round the tip. Next, let the end rest horizontally in a shallow grove on the board, and rotating it between your fingers, scrape it quickly with the knife, from the tip so as to give it the olive shape. Then draw the knife blade edge downward over the whalebone until the latter is sufficiently and evenly thinned, taking especial care to taper the last two-and-three quarter inches, down to the olive end. Do not use glass for scraping the bones, or a file. If you do so it will destroy the fibre and render the filiform untrustworthy and friable. Do everything with the knife-blade. Finish the instrument by drawing it frequently forwards and backwards through the tunnel of a smallest Gouley's catheter and that of Thompson's dilator. This will insure the ready passage at all times of the metallic instruments along the whalebone. The whalebones thus fashioned are very delicate and perfectly straight. I never use those with spiral or twisted ends, as I have found them uncertain in their action, and deceptive in the information they furnish. After whalebones have been used, they should always be immersed for a few moments in very hot water and then dried with a cloth. If they have become twisted by use they should be placed between the leaves of a large book, and allowed to dry. Twists and kinks are thus removed and the bone preserved straight, uninjured and in good condition for fresh use. Filiforms should be kept in a reed or tin quiver.

You have now an efficient filiform, and you must learn to use it properly. Therefore, bear in mind this cardinal rule, never to attack with a filiform, a stricture, especially a tight one, *after* the use on the same day of any catheter, bougie, or explorer. The chances are against success if you do. The filiform should always be used *first*, as any other instrument, soft or hard, especially if of larger size, is apt to press or ram the aperture of the stricture or its walls together. Its opening is thus distorted and rendered difficult of access, and the stricture becomes

† These whalebones are manufactured in New York at Nos. 161, 80 and 82 Duane St., for hatters' use. The mercantile gauge is No. 20, and the price about $5.00 or $6.00 a gross of 144 pieces, full length.

for the time impermeable to instrumentation, although passable by urine. Remember this and you may save yourself discouragement and mortification. You have seen me in public decline a filiform attempt after previous skilful and continuous instrumentation, and I did so because I knew my efforts must be futile. In an endeavor to pass a so-called impassable obstruction, you must take every precaution and give yourself every chance.

[*The Second Lecture in the next issue of* REPORTER.]

COMMUNICATIONS.

COLPO-PERINEORRHAPHY.*

BY JOHN W. GROFF, M. D.,
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Partial laceration or rupture of the perineum, and more especially of the vaginal portion, thus producing what has been called a skin perineum, the neglect of that laceration, with the consequent development of a rectocele, prolapse of the uterus, cystocele, etc., including all its attendant horrors, and the necessity for this operation of colpo-perineorrhaphy, or possibly for either operation separately, is, I am convinced, a not infrequent one, judging by my experience in medical practice.

Meeting, as I do, with many a case in which this accident occurred, it may be years ago, patiently listening to the long history of sorrow and suffering upon the part of the patient, provided you choose to, which will be given forth in volumes, give your time and attention to the recital in all its detail; guided and directed by this experience, I have taken it to heart and resolved to profit thereby.

All this as the result of the parturient act —the only painful process, physiologically, in nature. Perhaps in many cases due to misguided or misdirected efforts upon the part of the attending accoucheur, or in other cases, to a want of any effort at all upon the accoucheur's part,—a mere acting by catalysis, as it were—which I heard thus expressed upon one occasion, and which to my mind should be self-condemnatory; for the accoucheur's duties are sufficiently clear and obvious, to at once destroy this catalytic theory altogether.

*Read before The Montgomery County Medical Society, on July 22, 1891.

I recall that but a few short weeks ago, I was sent for to see a patient—Mrs. B., 68 years of age, who had been stricken with a slight apoplectic seizure. After developing the history of the trouble for which I had been summoned, I made inquiry in regard to other bodily functions, as is my usual rule, and thus touched upon the condition of her bowels, past and present. The facts developed were, that, 41 years ago, she was attended in her second confinement by Dr., afterward Professor Blank, we will name him. From what I learned in this and other cases like it, it appears that the Professor was not in the habit of devoting much time to his obstetric cases, but, on the contrary, gave ergot with a free hand, and applied the forceps early, thus making it appear that his life, if not his practice, depended upon his getting away at as early an hour as possible, upon all such occasions, regardless of consequences.

The result of this method of obstetric practice is well attested by the number of sickly women, who escaped with their lives, at the hands of this obstretrician, and who remained, and some of whom are *still* remaining, a living testimony unto the dreadfulness of such work and the results which followed therefrom.

In this case, the patient suffered a partial rupture of the perineum, which was neglected, and thus in time there developed all those attendant conditions, which render the life of such a patient miserable, together with a large rectocele. At present, she has frequent desire to evacuate the bowels, with utter inability to do so, except by the employment of purgatives, in order to produce loose and watery evacuations. I told her of the operative measures, which might be instituted in a younger person, but that in view of her age and infirmity, that would be out of the question in her case, and that she would have to bear her bodily affliction until relieved by the Angel of Death, palliative measures being the only ones applicable in her case.

Thus I might repeat, case after case, but a partial history of this one, together with that of the one in which an operation was performed and which I will treat somewhat in detail, will be sufficient for the purpose of the present paper.

In regard to partial rupture, Thomas in his work on *Diseases of Women*, says:

"Complete rupture presents such serious discomforts as a consequence, that partial rupture is by many viewed as a trivial circumstance. So it is by com-

parison, but so likely is it to be followed by prolapse of one or both vaginal walls, that it should never be undervalued. As soon as such prolapse occurs, uterine, vesical and rectal troubles become almost inevitable."

It is not my intention to touch upon the subject of complete rupture of the perineum at all in this writing.

It has been maintained by some one, that, in the progress and development of the human race, the brain itself has become larger and heavier—more developed, and consequently requires a larger brain-case or calvarium to contain it. Hence labors have become more difficult, painful and dangerous in order to give birth to larger heads, and that this will become still more so in the future, I will not attempt either to affirm or to deny this idea, but will leave it to the anthropologist to decide. Simply by this means desiring to call attention, more forcibly perhaps, to the great value and importance of anæsthesia in labor. I am an ardent advocate of the administration of an anæsthetic agent, during the process of parturition. It is now an almost invariable rule with me, when called to attend a case of child-birth, to take with me a can of Squibb's ether, for inhalation, and offer it to the patient as the best, surest and safest means of assisting her, in passing through the perils and tortures of child-birth. The pain is without a doubt, acute, the suffering agonizing, and why not make use of an agent, which is capable of almost extinguishing that suffering, and of allowing her to pass through the ordeal, undaunted and undismayed.

Many a surgical operation is performed, in which the pain to be endured would bear no comparison whatever to that of a severe case of labor, where full anæsthesia is employed, and which would be considered criminal nowadays, were such agent not made use of under the circumstances.

I have administered ether in labor with none save the best effects and the happiest results, and I now give it with a confidence, born of some experience, and perhaps a good deal of enthusiasm. The fact that it has been of immense service to me, will stimulate me to its continued employment in the future.

And further, the point which I wish to make is, that lacerations of the perineum are, I believe, far less frequent when such an agent is made use of properly, than under other circumstances.

Anæsthetics relax muscular and other tissues, thus allowing the birth canal and perineum to relax or stretch more readily. It relieves the pain, and hence more time can be allowed for the parts to stretch, instead of to tear. Besides, by using an anæsthetic in this way, it will not be found necessary to resort to the forceps nearly as frequently as is done by many practitioners, thus again diminishing the liability to tears, the forceps being in my opinion an admirable instrument, the more admirable, the less used.

City practice differs very essentially from country practice, and one community may, and undoubtedly does differ, it may be, very materially, from another. In the scope of country in which I have the honor to hold forth as a practitioner of medicine, the gynæcologist finds comparatively little work to do. Not that the necessity for his calling does not exist, but, because the majority of patients will object and many refuse any examination for the diagnosis of diseases of the genital organs, much less as a rule, consent to any operation. At times, in some instances, it is only after years of suffering, or by being brought, as it were, almost to the verge of the grave, that they will submit to examination, and if necessary, operation. Such was the case with the patient whose history I am about to detail, an extreme one of its class. To me, it was full of interest, doubly interesting on account of the very marked relief afforded by the operation, after the condition had existed for so many years. The patient, Mrs. Samuel H., first came under my observation during the month of January, 1889. I was called in with the hope of being able to afford her some relief, during a severe attack of sick-headache, and for procuring means to ward off future returns of the trouble, or at least to render them much less frequent and distressing.

These occurrences and especially the concomitant conditions, I may as well describe right here in the beginning. She was subject to sick headache, the assaults being violent in character, and occurring quite frequently, at times, their duration being various, in many instances continuing several days. The pain was very severe, rendering her as feeble and helpless as a little child. Invariably accompanied by vomiting, and when this feature broke in upon the scene, the poetry of the occasion became manifest, it was truly pathetic. When the nausea became distressing, indicating the advent of vomiting, she was compelled to assume a rather anomalous position, so it required two receptacles to receive and retain the discharges, one at either of two rather distant extremities. She was unable to retain her urine, this fluid gushing forth in volumes,

during the violent retching, which formed a part of each attack.

Her inability to control the outlet of this reservoir, was a very distressing feature with her, even when free from headache. In walking she was compelled to be very cautious, not to step too high, nor to indulge in laughter, for all these alike would bring forth a gush of urine, caused by the sphincter relaxing its feeble grip upon the contents within.

The vomiting and retching were violent in character concerning both of which she complained bitterly. These attacks of headache occurred frequently, their recurrence being promoted by the highly unsatisfactory condition of the gastro-intestinal tract, this feature being dependent upon the anatomico-pathological condition, to which I am about to refer, and for the restoration of which an operation was performed, which I will presently describe.

At the time of the operation, the patient was 51 years of age, medium in size and stature but of a highly neurotic temperament. In part, on account of inherited nervous predisposition, and in part, due to long-suffering, she had become excessively irritable and despondent, in fact she became a "household tyrant" long since.

Menstruation was still regular in recurrence, this function continuing its regularity until the summer of 1890, about one year after the operation, when she entered the period of the grand climacteric. She had been comparatively free from disease, with the exception of the neurotic element and the violent headaches.

Somewhat more than twenty-four years previous to the time of the operation, she became pregnant for the first time. Labor came on, the case did not advance as rapidly as thought desirable, and thus the attending physician saw fit to apply the forceps. The application was made high up, I have been informed, the delivery was accomplished, and as a sequel, she sustained a partial laceration of the perineum. This rupture was of such a nature as to be misleading, one of a kind which I think Prof. Goodell very aptly designates a skin perineum, the cutaneous portion being but slightly ruptured, or at least only to a limited extent, while within the vulval opening there was extensive separation of the tissues.

In those days, I fancy, operations for the restoration of lacerated cervices and lacerated perinæi, were not as common, nor as frequently performed, as within more recent years, or at the present day. At least, in this instance, nothing was done, no attempt having been made to restore the parts to a normal condition.

Right here in the occurrence of this laceration, and the subsequent neglect, in allowing the case to drag along, without performing an operation for the restoration of the parts to their previous condition, the foundation was laid for many years of dreadful, silent suffering. Silent, I said, for not a few women would rather suffer in silence for years and years than approach a medical man upon a subject which appertains to their sexual organs. In this case the lady was especially modest and retiring in her disposition. During the years immediately following the reception of the injury, comparatively little discomfort or inconvenience was experienced, but as the years rolled by, little by little, the difficulty increased and thus there developed a condition of affairs deplorable to the victim and direful to the beholder. This wretched state was connected with the act of defecation, and the manner in which this important process of nature was accomplished, or at times only partly so, I will depict, first giving the results of physical exploration.

Upon examination I found the cutaneous surface of the perineum but slightly ruptured. Within the vulval opening and extending upward upon the posterior vaginal wall, the tissues were separated very considerably, thus making the canal much larger and wider than natural.

When in the recumbent posture by bearing down, this being unnecessary when erect, there would bulge forward an immense tumor-like formation, due to enormous dilatation of the rectum—a huge rectocele. The separation of the tissues above noted, took away a wall or support for the rectum and then the patient, by bad habits, want of attention to personal hygiene, allowing herself to become constipated, with consequent straining at stool, gradually paved the way which brought about the formation of this immense rectal pouch. Thomas says that the tumor thus formed will sometimes equal in size a man's fist. I am quite positive that in this instance it was fully that large, thus making the case an extreme one of its class.

As would be expected, the uterus was displaced posteriorly with descent. The bladder may have been involved somewhat—cystocele—but this was of little account; there was no difficulty in passing water, the trouble was in retaining it. Under the influence of the operation and the subsequent

treatment this was entirely relieved. The point which overshadowed all others was the immense rectocele.

And now as to the manner in which the act of defecation was accomplished, this having been the trouble for many years. In the ordinary position, it was impossible for her to accomplish anything in the way of extruding fœcal matter. The fœces would collect in this pouch in one solid mass. The rectocele would bulge forward into the vagina, and by sufficient straining would protrude through the vulval opening, and over the perineum, it may be, and thus she would be utterly unable to attain any result. So she would push this mass back, replace it as best she could, bring her thighs in the closest juxtaposition possible while squatting, and then receive an injection of a considerable quantity of water (probably half a gallon) into the rectum, followed by straining—in this way she would generally be enabled to clear out her lower bowel. Even these measures at times failed, and so weakened had she become from long suffering, that, occasionally, she would be unable to go through this performance, but would sink to the floor utterly exhausted, without having completed the evacuation.

We now come to the operation itself.

With this patient, the point of chief importance was the immense rectocele; the other conditions were in comparison to this one, but slight, and hence were practically disregarded. The patient was anxious for relief, and hence my sole purpose and desire was to do an operation which would meet the indications and thus relieve her. I cared but little as to whether I should perform the classical operation of Sims, or of Emmet, upon the posterior wall, or any of the other set operations described in our text-books.

Friday, August 2d, 1889, I operated, assisted by my colleague, Dr. Keeler, and my father. The patient was anæsthetized and placed upon her back upon the table. The thighs were flexed upon the abdomen, and held there by two assistants, the lateral walls of the vagina being retracted by right-angled retractors.

Previously, the rectum had been thoroughly emptied, first giving a purgative, then flushing it with water to clear away all debris.

With a pair of scissors, I then proceeded to make the denudation, which I did from below upward, first upon the perineum and then upon the posterior vaginal wall toward the uterus. I made it sufficiently wide, so as to grasp plenty of tissue in passing the sutures, in order to obtain a firm cicatrix after the healing process had finished, and thus afford a firm wall for the bowel to press against during the act of defecation, the vagina being large and relaxed, thus affording plenty of room for so doing. The denudation was given somewhat the shape of a triangle, with the apex of the triangle up and the base down, this being in imitation of Hegar's operation, I find, although I was not aware of it at the time of so doing. The sutures were then inserted into the vaginal portion first, catgut being used for this part; for the perineum, I made use of silver wire, silk being used to draw the silver sutures into position, then drawn tight, and retained by compressed shot.

In regard to after-treatment, the patient was put to bed and kept as quiet as possible, in the horizontal position, but without any bandaging of the knees or thighs. The parts were kept as clean as possible, by the daily use of antiseptic injections of bichloride, 1 to 2000. The catheter was employed for the first few days for removing the urine. The bowels were kept soluble, to prevent any accumulation, and thus distension where this had existed so long and to prevent any straining upon the part of the patient, and thus possibly separation of the freshly-united surfaces.

Part of the silver sutures—every alternate one—were removed at about the end of a week, the remaining ones a few days subsequently. The catgut sutures required no attention.

The parts healed very rapidly, and, as far as I was able to ascertain, there was no pus whatever formed during the reparative process. Convalesence was rapid and the result of the operation thus far—now nearly two years—has been all that could be expected or even desired. With proper care and attention to the condition of her bowels, she is now able to move them, to attend to this function of nature, with as much comfort as prior to the accident, which induced the morbid condition. In fact, the patient was transferred from a condition of torment upon the one hand to a state of Elysium upon the other.

After the operation, the patient was placed upon general tonic treatment, which has been continued with occasional intervals up to the present time.

Collodion of Salol, useful in acute rheumatism, is obtained by dissolving salol 4 in ether 4, and adding to collodion 30 parts.

AMPUTATION OF THE CERVIX UTERI.[1]

BY J. D. CUMMINGS, M. D.,
AUSTIN, TEXAS.

Thomas in his work on the "Diseases of Women" says that "Ambrose Paré was the first surgeon who advised amputation of the cervix. In 1802 the operation was systematized by Osiander, who performed it twenty-three times, and after this it was resorted to by Dupuytren, Recamiér, Hervez de Chegion, and others. Lisfranc later on reported 99 cases with only two deaths. Huguier reports thirteen operations and no deaths; Sims over fifty operations and one death."

Thomas further says that by the galvano-cautery much better results are obtained. Out of the large experience of Dr. Byrne, of Brooklyn, with it no fatal cases are reported. The writer has not access to later cases of the operation except for carcinoma of the neck of the womb. This same authority reports twenty cases with no bad results. I am also apprised that so high an authority in uterine surgery as Dr. T. A. Emmett has said that this operation is only indicated in some cases of malignant or cancerous disease of the cervix. Many leading authorities, among them Barnes, of London, Thomas, of New York, and J. Marion Sims recommend amputation of the cervix for not only malignant diseases, but for enlargement of the cervix, from inflammation increasing the connective and other tissues of this part of the uterus; elongation of the cervix, whether congenital or due to disease; conical cervix, whether with or without elongation; granular or cystic degeneration, whether of the cervix or os of long standing and not remedial by other procedures. I will add to this list certain cases of lacerated cervix where the tissue has been deeply involved in the laceration, leaving a hard cicatrix, which often gives rise to multiform symptoms and general bad health. Also ragged eating ulcers, not yet cancerous in their nature, but liable to become so if not relieved. Again, whenever there is no doubt that the neck of the womb presses on the bladder so as to interfere with the proper performance of the function of this organ, not easily remedied by other means, undue induration of the cervix, leading to suspicion of ensuing cancer. In any case where the indurated or elongated cervix interferes with conception if it is desirable to have offspring, whether necessary as an addition to dilatation of the internal or external os uteri or not. In these cases very often where women have been married for years without having conceived, the external os will be found very narrow as well as the internal os. It is the opinion of the writer that the elongated or enlarged cervix is often the source of much trouble in malpositions of the womb, if malposition does not often follow as an effect. In the conical elongated cervix retroflexion of the womb necessarily follows. In such cases removing the redundancy allows nature to effect and maintain the proper relation of the pelvic parts. As an aid to relieve severe cases of anteflexion, requiring operations of various kinds for straightening the uterine canal, it is believed by the writer that a thorough amputation of the neck of the womb would be one of the best preliminary operations, if it does not relieve the trouble entirely. Different modes of performing this operation have been recommended. Among them I may mention the galvano-cautery, scissors, ecraseur and knife. I have used the knife and have had no bad results. Sims for a time would take off one lip and wait several months and then remove the remaining one. He, however, found this procedure unnecessary. With modern means of controlling hæmorrhage and its rare occurrence in this operation, I am induced only to mention it as one of the possible dangers following the same. Under antiseptic precautions, sepsis will rarely follow. As to cutting higher than is anticipated, and thereby opening up the peritoneal cavity, we may remark that we would be liable only in removing large malignant or other tumors, and should this complication arise proper drainage and antiseptic measures would probably insure complete recovery from the operation.

From the foregoing considerations it would follow that we would expect almost every case operated on in a proper manner to recover from the effects of the operation. As to any ultimate harm following the operation to the patient, it is the opinion of the writer that it cannot be shown. It certainly does not prevent conception, but, on the other hand, is liable to be followed by it. In two out of three cases that have come under my observation several children followed in the usual succession in each case.

Case I.—Mrs. J., operated on July 12, 1882. There existed general bad health. Examination showed a conical cervix and a narrow os. No untoward symptoms fol-

[1] Read before the Austin District Medical Society, June 25, 1891.

lowed the operation. Good health followed and several children.

Case II.—Mrs. P., was operated on about the same time; she had had one child. There existed a ragged eating ulcer, which failed to heal from ordinary applications, such as nitrate of silver, iodine, etc. Amputation of the cervix uteri resulted in complete recovery of the patient, and she has been confined repeatedly since.

Case III was operated on recently. She had been in bad health since marriage eight or ten years ago; has had no children, but has been treated by several physicians at times with some benefit, but with no permanent relief. One of the chief complications was frequent and painful micturition, accompanied with much burning, and a milky, cloudy condition of the urine, showing irritation of the bladder. On examining the womb, the external os was very small, and the neck was conical in shape and somewhat elongated; more or less hardness of the neck also existed. The internal os was very narrow, hardly admitting the smallest sized sound. Retroversion existed in a marked degree. The sound had to be bent backwards in order to enter the body of the womb at all. An attempt to replace the organ and internal appplications of Churchill's tincture of iodine were made but no relief followed. Amputation of the cervix was then recommended and assented to by the patient. May 9th she came in from the country prepared to remain until the operation and its effects were over. Drs. Mathews and Pointon assisted me in the operation. The knife was used and a Λ-shaped piece of the neck, including the anterior and posterior lips of the womb was removed. The point of the Λ-extended nearly to the internal os. Two stitches of silk, one on either side of the external os, sufficed to bring the parts under good cover of healthy tissue. The bladder symptoms persisted for several days, but have since entirely disappeared. The general health has very much improved. While the internal os on first examination after the operation seemed to be sufficiently pervious, yet some pain accompanied the first menstrual period. Since the patient has visited me at my office, and I found a very much contracted condition of the internal os, and later I incised the same and fully dilated both the internal and external os. The last report from the case was very favorable indeed.

In the subject chosen for this paper I am aware that I am treading upon ground that may be said to be forbidden by some, and that in the recommendation of this operation I cannot be said to be in the fashion. Yet, at one time, not many years ago, when our lamented Sims so ably defended this procedure, then it was popular. Since his death, lacerated cervix with its accompanying operation has had its day, and has run what may be said to have been a very popular course, and numbers with its victims probably more failures than any other operation ever done in so short a time. Since laparotomy for diseased ovaries and tubes may have swung too far in the extreme, many ovaries and tubes having been extracted that would have rendered their victims more happy by letting them alone, yet with all this, many otherwise doomed would have been relieved of long and excruciating suffering by the removal of their diseased ovaries and tubes. Painful os uteri have been remedied by well directed operations for repair of lacerated cervix, and the writer must contend that amputation of the cervix has its proper field of usefulness, and it extends farther than narrowly limiting it to removal of cancerous cervices.

ALIMENTATION AND ARTIFICIAL FOODS.*

BY F. C. HERR, M. D.,

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Prior to the time that physiologists came to regard life processes as an even balance between constructive and destructive metamorphosis in the tissues—the blood included—the problem of scientific feeding did not seriously enter into the subject-matter of the physician's thought. The inspiration of the practitioner then was the empiricism of the past, and to deplete our ensanguinated system, to rouse into activity a torpid liver, to lull pain and soothe disquiet with strong opiates, fulfilled the indications of scientific therapeusis. But the evolution of a great science has changed all this; the tyranny which that opinion exercised over the professional mind was abolished by the genius of a man whom we all honor in our daily professional life. I refer to Dr. Robert Graves. He made the world his debtor when he said to his pupils, "If you are at a loss for an epitaph to inscribe on my tomb, you may use these words: 'He Fed Fevers.'" It is

* Read before the Kansas State Medical Society, at Wichita, May 15th, 1891.

well sometimes to go back and look over the work of the masters, to impress more firmly upon the mind those great principles of our science which constitute the corner-stone of rational and scientific medicine. Dr. Graves saw, in advance of other men, the disasters of protracted abstinence, and in language strong and eloquent he urged systematic feeding as the sheet-anchor of the physician's hope in exhausting disease.

I quote one brief passage from the work of Dr. Graves: "Now, in a person laboring under the effects of fever and protracted abstinence, when sensibilities are blunted, and where functions are deranged, it is not at all improbable that such a person, perhaps also suffering from delirium and stupor, will not call for food, though requiring it; and that if you do not press it on him and give it as a medicine, symptoms like those which arise from starvation in the healthy subject may supervene, and you may have gastro-enteric inflammation or cerebral disease, as the consequence of protracted abstinence.

"You may perhaps think that it is unnecessary to give food, as the patient appears to have no appetite, and does not care for it. You might as well allow the urine to accumulate in the bladder, because the patient feels no desire to pass it. You are called on to interfere when the sensibility is impaired, and the natural appetite is dormant, and you are not to permit your patient to encounter the horrible consequences of inanition because he does not ask for nutriment."

What a splendid plea for enforced feeding. It has proved an inspiration to medical teachers, and has filled with new hope and endowed with new resource the medical practitioner.

The dynamic forces of life are preserved through the maintenance of effective nutrition. It is an axiom of physiology that, not what we eat, but what we digest and assimilate, conduces to the up-building of the body and the support of life. "From the food the blood is fed; from the blood the tissues are fed." A simple proposition is this, but it embodies a vast deal of medical philosophy. Roughly stated, it might be said that the order of sequence in the construction of a vigorous body is good food, good blood, good tissues.

The progress of knowledge has disclosed this vital truth in relation to organic functions, namely, diseased action is not exalted vital force, and the paramount indication in all forms of disorder is the maintenance of the highest possible degree of healthful nutritive activity. To fail to take cognizance of this is to abandon the most potential lever that science furnishes for the successful combat of disease.

As that ensemble of physiological phenomena which we call life is the resultant of chemico-vital changes in the food, primarily it follows as a corollary that too great care cannot be exercised in the selection of nutriment. In it are the potentialities of life; in it may lie concealed, in unassimilable elements, the possibilities of gradual, but inevitable decay. Dr. Lander Brunton affirms that the mal-products of nutrition are positive depressant poisons. Physiological experiment confirms this, and the observations of the clinician give equal strength to the statement. Lives have been sacrificed to ignorant and injudicious feeding, and the administration of drugs often does not so much tax the skill and knowledge of the physician as the administration of food.

Here I am confronted with the very practical question of specific form and variety of food. And I may premise what may follow with the statement that a variety of elements enter the inter-question of suitable food. First, the quantity of food as to purity and freedom from adulterations; second, its nutritive value; third, its digestibility; fourth, its palatibility. Looking carefully over this order of arrangement in the essential qualities of suitable food I am reminded that palatibility is an element of such vast importance that it should perhaps be given in the first place, in order. The therapeutist has indicated the necessity for good foods, and the chemist's art has placed at his disposal one after another of much vaunted nutrients, and still the question confronts us: Has science furnished us with a food that will meet the indications for nutriment in a wide range of morbid states—a reliable food—easy of digestion, readily assimilable, agreeable to the taste, and with all such in nutritive material.

The dietetics of the sick-room like all things else, change. It is within the memory of men young in the profession when beef-tea and beef-essence, in the minds of the laity, possessed more importance than the physician with all his resources. And a prejudice still lingers with many people, and with some physicians, in favor of these once much used and much esteemed aliments. But the educated physician sees in them little more than the merits of a placebo and the concensus of enlightened judgment, is in favor of forms of artificial food that have been shown by analysis to possess in large degree, and in readily assimilable form, all

the constituent elements of the human body. The busy life of the average practitioner does not afford time nor opportunity for the investigation of these special subjects, and in the belief that the ends of scientific medicine will be there subserved I desire to submit to your consideration some facts which I have collated respecting the comparative merits of a variety of artificial foods. In doing this I desire to emphasize one obvious truth, namely, that all artificial foods are made with the paramount design to sell.

And it is the hope of their manufacturers that the medical profession will find in them enough of merit to justify their endorsement. The interest of the physician lies in restoring health to the sick and afflicted; the interest of the manufacturing chemist in creating a market for his products whether they be good, bad or indifferent.

I have an abiding conviction that the highest interests of our patients are often sacrificed to a credulity which compromises our best judgment in these matters. The best medicine is not a whit too good for our poorest patient, and only the best food should receive our endorsement. It is furthermore incumbent upon us as educated men, charged with grave responsibilities, to know that what we do use is the best obtainable.

But what is the best? In regard to the matter of foods I have secured the analysis of nine varieties or brands of artificial food, the Mosquera's Beef-Meal, Armour's Ext. of Beef, Liebig's Ext. of Beef, Beef Peptonoids, Wyeth's Beef Juice, Valentine's Meat Juice, Cibil's Fld. Ext. of Beef, Bush's Bovinine, and Murdock's Liquid Food. These foods comprise the best known and most favored preparations upon the market. They are all candidates for our support. They come to us highly lauded—all of them—by their manufacturers. Some are good, some indifferent, some worthless. Some will render great service in times of dire need, others, with much of promise, and more of parade, will be found barren of life-giving qualities.

The mal-products of nutrition—as Dr. Brunton observes are depressant poisons. Urea, whether elaborated within or without the system, is a physiological poison. The same is true of creatin.

A reference to the attached table will show that Liebig's Ext. of Beef, and Armour's Ext. of Beef contain nine and a fraction per cent. of nitrogen—a very fair percentage. But it would be an error to accept this as representing the actual percentage of *available* nitrogen in these pro-

Brand.	Moisture.	Fat.	Mineral matter.	Phosphoric acid.	Total nitrogen.	Total proteid or albuminous matter.	Peptone.	Contents, (weight) of each package.	Retail price.	Comparative value, based on total albuminous matter.	Equivalent of each package in raw beef, based on total albuminous matter.
Mosquera's Beef-Meal	8.81%	10.54%	4.02%	1.67%	12.5 %	78.12%	27.17%	8 av. ozs.	$0.50	$0.50	32 av. ozs.
Armour's Ext. of Beef	24.0 %	Trace	22.5 %	6.82%	9.24%	57.74%	None	2 av. ozs.	0.50	0.0925	6 av. ozs.
Liebig's Ext. of Beef	21.4 %	Trace	22.5 %	6.36%	9.18%	57.37%	None	2 av. ozs.	0.50	0.0925	6 av. ozs.
Beef Peptonoids	10.0 %	3.7 %	4.6 %	1.7 %	3.85%	24.06%	Trace	6 av. ozs.	1.00	0.0115	7.5 av. ozs.
Wyeth's Beef Juice	51.4 %	None	19.25%	2.38%	4.48%	28.00%	None	1.75 fld. ozs.	1.00	0.05	2.5 av. ozs.
Valentine's Meat Juice	60.8 %	None	7.5 %	3.18%	3.41%	21.31%	0.51%	1.75 fld. ozs.	1.00	0.035	2 av. ozs.
Cibil's Fld. Ext. of Beef	57.2 %	None	20.25%	3.68%	3.64%	22.75%	Trace	2.75 fld. ozs.	0.60	0.0475	3.25 av. ozs.
Bush's Bovinine	83.1 %	None	0.8 %	Trace	2.4 %	15.10%	None	5.75 fld ozs.	0.60	0.075	4.5 av. ozs.
Murdock's Liquid Food	84.6 %	None	0.5 %	Trace	2.13%	13.31%	None	5 fld. ozs.	0.55	0.0525	3.5 av. ozs.

ducts. In the Liebig process of manufacture the meat is simply treated with either cold or warm water, and the extracted matters contained in the resulting solution are subjected to evaporation, leaving a paste containing all the soluble constituents of the meat without any or very little of the proteid matter. The percentage of nitrogen designated in the table is, therefore, misleading, as it exists in the form of urea and creatin largely. The Armour's Ext. of Beef is prepared in the same way, and contains the same effete nitrogenized constituents. Dr. Fothergill has cast deserved imputation upon this class of foods, by declaring that they did not possess much more nutritive value than concentrated urine. But, in addition to the unavailable nitrogen these extracts contain a large percentage of moisture and mineral matter, and are devoid of fat and peptones. These forms of artificial food possess a nutritive value in weight twice perhaps in excess of lean meat or beef.

The beef peptonoids of Carnwick are shown by analysis to be a most inferior food. They have always stood in favor with the profession. The suave emissaries who so generously enlighten us upon these matters always assure us that beef peptonoids represent five times their weight of nutritive value in beef and milk. The table shows that it is free from peptone, hence its albumen, from whatever source it is derived, is in a crude condition, and has never been subjected to a peptonizing process.

In the percentage of proteid matter beef peptonoids compare unfavorably with other preparations of the list, while more than 50 per cent. of the preparation is soluble in water, and resembles dextrine—plainly indicating that the starch has been largely converted—no matter from what source derived, and probably by cooking ordinary wheat flour. Beef peptonoids are inferior in real nutritive value to the foods made after the Baron Liebig process.

I do not feel that much could be gained by elaborating upon the individual articles named in the table. It indicates at a glance the comparative nutritive value of these foods. But I cannot dismiss the subject without a reference to powdered beef, and Mosquera's beef-meal and beef-cocao. You are quite well aware that powdered beef is simply the residue left after extracting the meat with water.

In the manufacture of Liebig's extract a vast quantity of material accumulates, and the profitable disposition of this has lead to the production of powdered beef. This preparation has the endorsement of some eminent therapeutists, among them Dujardin Beaumetz, and in reality it is a concentrated food, differing from beef, which contains 75 per cent. of moisture, it containing none, while at the same time it is free from the inorganic salts which are so essential in the digestive process. It is just as much of a tax upon the digestive functions as pure beef, and all things considered, it is less desirable as a food, especially in conditions of enfeebled and disordered digestion.

Mosquera's beef-meal and beef-cocao are among the newer candidates for professional favor. They have already received the endorsement of reliable, and competent observers. Prof. Crittenden, of Yale College has made a careful analysis of beef-meal, and he estimates its nutritive value at least six times its weight in lean beef.

Dr. Martin, chemist of the Health Board in New York, as also Dr. Justus Wolfe of the same city, estimates it to be ten times as nutritious as the natural meat. Prof. John Atfield, London, England, testifies that a personal examination made by him of beef-meal shows that it is superior to any preparation to which his attention has been called.

Here let me remark that beef-meal is not a ready prepared food. It is entirely wanting in flavor and seasoning. These you must supply just as you would in the case of beef-steak. Your mastery of the cuisine will determine in a large degree the measure of utility in this food as it is not contraindicated in any condition of morbidity—it is equally applicable in simple indigestion, and in typhoid fever. The mode of preparation of this food is opposed to the Baron Liebig process which assumes that the extracted and soluble principles represent the nutritive wealth of the beef. The fact is that the nutritive value of these extracts has never been established by analysis until now, and their clinical worth has been wholly a matter of assumption.

When the residue, left after extraction by the Liebig process, is subjected to the action of pepsin and pancreatin it is dissolved and converted into peptone—thus showing that nature meant it for a food, and that it is in reality the nutritive portion of the beef.

In the preparation of beef meal nothing is taken from the beef but water, and nothing is added to it except a small percentage of extractive matter contained in the juice of the plant used in the peptonization of the albuminous constituents of the meat.

As in most forms of sickness the balance

between waste and repair is lost, the consumption of tissue accelerated and emaciation with prostration ensues, it becomes imperative to supply the economy with such food as will repair the waste, give strength to the enfeebled tissues, and furnish fuel for the consuming fire. I do not know of any food that will do this in the same measure that Mosquera's beef meal will. The comparative value of this food is shown in the table.

My attention was called to the Mosquera foods early in the history of their introduction, and I have faithfully tried them in a variety of disorders—always with good results—sometimes with surprising ones. I have no hesitation in affirming that as a food, and a medicine in all forms of dyspeptic derangement beef-cocao has no equal. Not that it will speedily and certainly restore to health every subject of these disorders, but that it will in the majority of cases afford relief, and in a large percentage effect a cure.

If after your accustomed morning meal you go to your labor with a feeling of languor and apathy; if you feel as the dyspectic usually does, borne down by an invisible load of something, just mix with a cup of hot milk one tablespoonful of beef-cocao for your breakfast meal, and you will go to your daily task with a clear head and a light heart.

A great multitude of slight ailments are directly traceable to enfeebled digestion and impaired assimilation. The pathogenic condition here is sub-normal nutrition—the result of excessive ingestion of coarse and non-assimilable food. Here beef-meal alternated with beef-cocao will soon change the complexion of things. I cannot stop to consider or indicate these special conditions; they are legion, but Dr. Lionel S. Beals, in his "Slight Ailments" has passed them all in review, and had he known then that the plodding scientist would soon place at our disposal such foods as these he would have urged their use.

You are all aware that nutriment may be furnished to the body, and life sustained, without the use of the digestive organs proper. The mode of alimentation by enemata, since the introduction of beef-meal, has grown to be a most satifactory method, indeed. The Mosquera foods are so thoroughly adapted to every purpose of easy assimilation that nutrition is accomplished by absorption, as distinguished from digestion with surprising facility.

I am well aware that the employment of nitrogenized food in febrile diseases is hardly in consonance with the orthodox practice. But we are not obligated to orthodoxy. Besides, the latest scientific and clinical researches refute the theory that animal foods are contra-indicated in febrile states. The excretion of nitrogenous products is much increased in all forms of pyrexia, and reasoning a priori the conclusion would be inevitable that as nitrogenous metabolism is already excessive it would be injudicious to introduce into the systen yet more nitrogen. But the experiments of Immerman, confirmed later by Bauer and Kunstle, entirely subvert this theory, and expose the fallacy of such reasoning. These investigators have shown that in typhoid fever albuminous food is beneficial, not because it diminishes the excretion of nitrogen, but because it supplies this element to the fevered tissues, and "nitrogenious foods alone are capable of being converted into the albumin and fibrin of the blood, and thus assimilated by the tissues."

In all forms, therefore, of protracted pyrexia, Mosquera's foods are invaluable. Small quantities of beef-meal frequently administered will supply to the economy a large percentage of tissue-forming elements, and it will be demonstrated in the near future that not only must fevers be fed, but the food supplied must be of the character here indicated in order to achieve the best results. Let not the bias of early teaching stand in the way of accepting new doctrine. If men always conformed to precedent and experience the march of progress would be slow indeed.

In the manifold forms of bowel derangement so common in miasmatic regions, these foods will be found available. In actual dysentery I have employed them with excellent results. Being largely predigested and easy of assimilation, they are not contra-indicated in any condition. Only one exaction do they make of the physician, namely, that they shall be seasoned to be made acceptable to the patient. The same is true of almost every other food, and while this labor and skill is being expended, it is as well to expend it upon foods of superior merit. In current medical literature I see reports of cases of pulmonary consumption treated by Profs. Gibbes and Shurly with iodine, and gold and sodium chloride hypodermically, and chlorine gas locally, with a reliance upon Mosquera's foods for adequate nutriment. Whatever influence any system of medication may have upon the pathology of tubercle, all will admit that the profound disturbance in the nutritive processes in this disease appeals to our knowledge and skill

for prompt and efficient relief. And to-day, if I were placed in charge of consumptive patients exclusively, and given my choice between drugs and foods as exclusive agents in their management, I would say give me the foods.

What are the diatheses and cachexia that haunt the doctor's mind? What do they require at our hands for their eradication? Medicine? I imagine not. More of sunlight, more of fresh air, more of judicious exercise, and, greater than all, *more* of *good food* is the *sine qua non* of substantial amendment in them. So the good results obtained by Profs. Gibbes and Shurly might, perhaps, with strict propriety, be ascribed to the judicious use of good food.

After all, what is every disease but some modification of nutritive function; in its final analysis every morbid process is some derangement, slight or grave, in the up-building forces of the economy.

Dr. Frederick L. Knight, before the Climatological Association at the 1890 session, said, "at present, the usual preparation of food is so bad that after one has found out the class of nutriment a patient requires it is well-nigh impossible to secure it."

It is beyond question that these foods—beef-meal and beef-cocao—are the best artificial foods yet offered for use.

As the table shows only the composition of beef-meal, it may be here remarked that beef-cocao comprises equal parts of beef-meal, sugar, and Dutch chocolate, so that it is about one-third the food-value of beef-meal.

In nursing women, beef-cocao meets the indications of an ideal food.

In surgical practice, where the problem of dietetics is important, these foods must find a wide range of applicability.

In the multiform neurasthenic conditions of women they are highly serviceable where tissue-waste exceeds repair, and where repugnance to food appears a constitutional quality.

The physician can choose from a multitude of drugs and foods that which he will use, but duty bids him to employ only those that *are* good—duty to the sick and suffering and confiding public.

The natives of the New Hebrides smear the points of their arrows with a swamp earth, the poisonous agent in which, according to Dr. Ledantec, is the septic vibrio of the tetanus bacillus.

Society Reports.

AMERICAN SURGICAL ASSOCIATION.

THE TWELFTH ANNUAL MEETING OF THE ASSOCIATION WAS HELD IN WASHINGTON, D. C., SEPTEMBER 22, 23, 24, AND 25, 1891.

TUESDAY—FIRST DAY.

The Association was called to order by the President, Dr. Claudius H. Mastin, of Mobile, who delivered the Presidential address.

The next paper was by Dr. D. Hayes Agnew, an abstract of which follows:

PRESENT STATUS OF BRAIN SURGERY BASED ON THE PRACTICE OF PHILADELPHIA SURGEONS.

What is the present position of brain surgery and what practical lessons can be deduced from a review of the recorded results in this department of surgery? The object of the author was not to glean the entire field, but to confine himself to the work done by Philadelphia surgeons in trephining for epilepsy, traumatic and Jacksonian intracranial abscess, hemorrhage, hydrocephalus, cephalalgia, microcephalus, and neoplasms.

Traumatic epilepsy.—Fifty-seven cases were recorded. Of this number forty-one recovered from the operation. Four died, and of twelve the result is not given. Thirty-two experienced temporary relief, nine obtained no benefit, four passed out of observation, and four were operated on too recently to permit of the result being determined, and four are reported cured. In one of the cases reported cured, the patient has been free from attacks for twenty-eight months, in two for ten months, and in the fourth a branch of the great occipital nerve was found imprisoned in the bone cicatrix. While the results in these cases have not been satisfactory, it by no means follows that surgery holds out no hope against epilepsy. It is not saying too much to assume that surgery is responsible for the great majority of traumatic epileptics, though this statement does not by any means criminate the surgeon of an early day. Whenever the profession can accept the doctrine that all depressed fractures, however slight the depression, and entirely irrespective of pressure symptoms, are proper subjects for trephining, then will traumatic epilepsy largely disappear from

the list of surgical diseases. It is not improbable, in view of the greatly diminished risk of trephining, that the operation will be extended even to cases of simple fracture or fissure of the skull.

Jacksonian epilepsy.—The table contains fourteen cases. In all the discharging centre was removed. Nine recovered and four died. Of those recovering, three had less frequent and less violent attacks, one realized slight benefit, one disappeared shortly after operation, and in two no benefit was observed. One is reported as cured, and in that case the operation was done during the present year.

Abscess.—Eighteen cases of this nature have been collected. Six had had fracture of the skull, two had syphilitic necrosis, in one a foreign body had entered the brain, in nine the abscess was due to middle ear disease, and in two there had been a severe blow without fracture of the skull. All the patients died in less than fourteen days.

Five cases of trephining for intracranial traumatic hemorrhage are recorded in each instance. The symptoms necessitating operation developed within twelve hours after the reception of the injury. Four of the five cases recovered not only from the operation, but with the restoration of the suspended functions.

Of trephining for acute and chronic hydrocephalus, five cases are reported. All the cases died, one living to the forty-fifth day. As hydrocephalus is usually due to tubercular disease or to morbid growth, it is difficult to understand on what ground such operations are undertaken.

Cephalalgia.—Five cases are given, in each of which the focus of pain was referred to the neighborhood of a scar on the scalp. In four of the cases complete relief was afforded.

Trephining for microcephalus. — Seven cases are reported, of which four died and three recovered from the operation. One of the deaths, however, was due to scarlet fever, occurring shortly after the operation. The result in the successful cases is reported as "moderate improvement." From the results obtained from the education of idiots, the author thought it wiser to relegate these unfortunates to special training schools, rather than to the trephine and rongeur. The debatable cases would be those accompanied with athetosis, in which condition some improvement might be obtained.

Brain tumors.—Only four operations for brain tumors have been done by Philadelphia surgeons. In one the growth was a fibroma weighing four ounces. The operation was done by Dr. Keen, December 15th, 1887, since which time the patient has had only six epileptic seizures. In the second case, done by the same operator, the tumor was in the occipital lobe and not removable. The patient died the following day from shock and hæmorrhage. In the third case no tumor was found, and in the fourth a cyst occupying the cuneus was found and emptied. The patient died in thirty-six hours, and at the autopsy a large sarcoma was found occupying the temporal sphenoidal lobe.

The deductions presented by the author are as follows:

1. That all fractures of the skull attended with depression, however slight and entirely irrespective of symptoms, should, in view of the late after effects, be subjected to the trephine.

2. That trephining for traumatic epilepsy promises only palliation at best.

3. That trephining for Jacksonian epilepsy is to be regarded as only affording temporary benefit.

4. That trephining for abscess, in view of the fact that all such cases left alone almost invariably terminate fatally, is entirely proper, and that the earlier such operation is done the better.

5. That trephining for intracranial traumatic hæmorrhage is both an imperative and highly promising operation.

6. That trephining for cephalalgia or traumatism, medical measures having failed, should be undertaken with every prospect of success.

7. That trephining for hydrocephalus is a useless operation.

8. That trephining for microcephalus, independent of athetosis, confers no credit upon surgery.

9. That it is more than probable that, as our observations multiply, the sphere of the trephine as a preliminary for the removal of brain tumors will be lessened rather than be amplified.

DISCUSSION.

Dr. John Chiene, of Edinburgh, did not take the same depressing view in regard to traumatic epilepsy. He referred to three cases in which decided benefit had followed operation. He agreed fully with what had been said in regard to operation in depressed fracture whether symptoms be present. As regards methods, he spoke of simple measures for locating the fissure of Rolando. The upper extremity may be located by means of a piece of string, being one-half

inch behind the middle. The angle may be secured by folding a square piece of paper into four, around one of the angles. Three of these parts will give the proper angle. The purification of the scalp is a difficult matter but may be accomplished by shaving and soaking with carbolic lotion for three days. For opening the skull he advises as safer than the traphine, the gauge and mallet. For enlarging the opening the gauge forceps fill a useful purpose. For puncturing the dura and the brain he uses a Græfe knife. Hæmorrhage from the bone may be checked by plugging with a match, bleeding from the brain, by hot water. Stress was laid upon the necessity of constant watching of brain cases and illustration cases cited. In one case of supposed injury to the head (but which later proved to be a case of apoplexy,) in which the patient was in a dying condition, great improvement eventuating in practical recovery followed trephining.

Dr. W. W. Keen held that every case of depressed fracture should be operated upon even in young children. A blow upon the head not sufficient to cause fracture may produce laceration of the dura or of the cortex. In regard to linear fracture, however, he was disposed not to accept the views that operation should be performed. In regard to tapping of the ventricles, he thought that further experience and animproved technique would lead to better results. In epilepsy he suggested the use of the bromides after operation had been done. In many cases of brain tumor, where there is no hope of removing the growth, great comfort may be afforded the patient by removal of bone.

Dr. Charles D. Nancrede, Ann Arbor, reported cases in which cure had followed operation for traumatic epilepsy, in one the case was of ten year's duration. Often cases that are reported as failures, soon after the operation prove to be cures when followed for a longer time. The operation removes only one of the elements that is causing the epilepsy. In speaking of these operations he stated that hæmorrhage from the skull could be checked by forcing in the diploe. In regard to simple fissued fracture he asked how the diagnosis could be made.

Dr. Roswell Park, Buffalo, differed from the author as regards the results of operations for epilepsy. He had himself had cases in which decided benefit was afforded. In order to determine the effect, time must elapse so that the epileptic habit may disappear. The operation removes the anatomical cause, but ordinary therapeutic measures are needed to counteract the secondary condition. Reference was also made to the relief afforded in brain tumors even when the removal of the growth was not contemplated. He reported two cases of craniotomy for microcephalus in which benefit had followed.

Dr. H. C. Wood, Philadelphia, thought that we should wait before coming to any conclusions as to the result of treatment either medicinal or surgical. He referred to one case in which under medicinal treatment the attacks remained absent for seven years and then returned. He advised that in these cases before the contemplated operation was performed, a mock operation should be done and the effect noted. He cited cases in which such measures had been followed by benefit.

Dr. J. J. Putnam, Berlin, thought that a simple smooth depressed fracture would not be likely to cause any symptoms. The presence of a sharp spicula of bone probably will cause irritation. Probably the most important element in the causation of trouble is the results of the original injury to the cortex. The interstitial changes in the cortex takes the form of sclerosis and it seems *a priori* doubtful that removal of the bone would materially affect it. The operation may not prove indifferent for the cicatrization of the wound may lead to harm.

Mr. Thomas Bryant, London, had been much struck with the emphasis with which Professor Agnew had insisted upon the treatment to be followed in depressed fracture. As a practical rule he was disposed to agree with him, but there are certain exceptions ; he did not think it wise to encourage the practitioner to trephine and elevate every case of depressed fracture. He could recall many cases of depressed fracture followed for years in which no symptoms followed. Depression of the lateral aspects of the skull are not so apt to be followed by symptoms as depression of the vault of the skull. From these remarks, he said, it would naturally follow that he disagreed with the observation that in every case of fissure of the skull, operation should be done. He wished Dr. Agnew had gone more thoroughly into the reason for this statement. If there has been no brain symptoms, although the blow may have been sufficient to cause fracture, it would not be wise to insist that we should at once proceed to explore to see if there is fracture. It is better to wait and watch for symptoms, being ready to operate as soon as there is a suggestion of something wrong. Although the risk of explorating operation may be slight, yet it must be admitted that it is attended with some danger.

Dr. D. Hayes Agnew:—In traumatic epilepsy I did not condemn operation, but curative results should not be expected from it. Its result is only one of amelioration. He could not withdraw his statement made in the paper, for in many of the cases of traumatic epilepsy, there has been no history of unconsciousness or other symptom. There has been a blow on the head and many years later epilepsy has appeared. It is impossible to determine the condition of the internal table of the skull by inspection of the external table. He had seen a simple crack in the skull with the internal plate forced downwards some distance.

A paper on Resection of the Wrist, by Dr. Rafael Lavista, of Mexico City, Mexico, was presented and read by title.

REPORT OF A COMMITTEE ON THE RESULTS OF TREATMENT OF SIMPLE FRACTURE OF THE FEMUR, BY STEPHEN SMITH, M. D., NEW YORK.

At the meeting of the American Surgical Association held May 15, 1890, the following preamble and resolution was adopted:

WHEREAS, In the treatment of fracture of the shaft of the femur, the question often arises as to what is a satisfactory result in a given case, therefore

Resolved, That a committee be appointed by the President, to report at the next meeting of the Association, what in their judgment under the methods of treatment, would be considered as satisfactory results.

The following committee was appointed: Dr. Stephen Smith, New York; Dr. D. Hayes Agnew, Philadelphia; Dr. David W. Cheever, Boston; Dr. D. W. Yandell, Louisville; Dr. Chas. T. Parker, Chicago; Dr. P. S. Conner, Cincinnatti; Dr. Charles B. Nancrede, of Ann Arbor and Dr. Hunter M'Guire, Richmond, Va.

The question referred to your committee has an important bearing upon the jurisprudence of surgical practice. One of the most frequent causes of prosecution of surgeons is the alleged maltreatment of fractures of the femur.

The following circular was sent by the committee to the members, "What should be considered as a satisfactory result (other than perfect union) in the treatment of a simple fracture of the shaft of the femur." The committee has reviewed the several questions raised and endeavored to secure a common ground on which the Association can take its position, and on which members can individually stand before the courts.

1. Bony union: The necessity of firm bony union does not admit of discussion. The amount of callus should not be taken as a criterion of the success of treatment.

2. Relation of long axis of the fragments. While it is the aim of the surgeon to restore the normal relation of the long axis of the fragments, yet it is generally impossible to secure exact apposition of the fractured surfaces, nor can the normal long axial line be restored with mathematical precision.

3. Correspondence of the anterior surfaces of the fragments. On this depends the position of the foot. The result of treatment to be satisfactory requires that the anterior surface be in the same plane.

4. Length of limb. This was formerly regarded as the test of success of treatment. The records of the past shows that shortening was the universal rule. The discovery of the natural discrepancy in the length of the lower limbs has considerably modified our estimate of this test 90 per cent. of healthy, uninjured persons have lower limbs of unequal lengths. In 35.8 per cent. the right limb is the longer; in 54.3 the left is the longer. If the amount of shortening does not exceed the average natural difference in the length of the limbs, viz: about one-half an inch, the result will be in accordance with the laws of nature in the conformation of the lower extremities. If the shortening does not exceed the extreme limit of difference in the lengths of the natural limbs, viz: about one inch, the result should be considered satisfactory. An unsatisfactory result as regards shortening exists only when the amount of shortening exceeds one inch.

5. Lameness: This is a symptom of variable importance. Some will have a limp with one-fourth inch shortening while others will not limp with one-half or one inch shortening. In many cases the limp disappears with time, or if it continues it is the result of careless habits of the patient.

6. Restoration of function. Essential to the function of the femur is strength of the femur at the seat of fracture, free and unimpeded action of the muscles and proper motion of the knee-joint. The determination of the degree of restoration of function can not be made for at least one year after the cessation of treatment.

7. Conditional results. There is a class of cases in which our estimate of results must be based upon a careful study of the special circumstances connected with the treatment

of each case. Results widely different from those already given, must be regarded as satisfactory when we consider the circumstances under which the treatment is necessarily pursued. The treatment may have been conducted under circumstances in which it was impossssble to secure proper apparatus, or the injury may have involved other parts so as to prevent the patient from taking the necessary position, or the patient may have suffered from delirium or other malady.

The following conclusions were presented: A satisfactory result has been obtained in the treatment of fracture of the shaft of the femur when—

1. Firm bony union exists.
2. The long axis of the lower fragment is either directly continuous with that of the upper fragment or the axes are nearly parallel lines, thus preventing augular deformity.
3. The anterior surface of the lower fragments maintains nearly its normal relation to the plane of the upper fragment, thus preventing undue deviation of the food from its normal position.
4. The length of the limb is either exactly equal to that of its fellow, or the degree of shortening falls within the limits found to exist in 90 per cent of healthy limbs, viz: from one-eighth of an inch to one inch.
5. Lameness, if present, is not due to more than one inch of shortening.
6. The conditions attending the treatment prevent other results than those obtained.

Adjourned.

WEDNESDAY MORNING—ASEPTIC AND ANTISEPTIC DETAILS IN SURGERY, BY DR. A. G. GERSTER, NEW YORK.

Personal cleanliness and cleansing of the field of operation are to be accomplished by mechanical measures, rather than by disinfectants. The dirt and oily matter of the skin is removed by emollient potash soap and stiff brush. This is followed by the germicidal lotion. The hands of the surgeon may be sterilized in the following manner. The nails are trimmed short, the hands scrubbed with soap and brush in hot water for one minute. The nails are then cleaned and the hands immersed in strong alcohol, and then washed in 1 : 1000 corrosive sublimate solution. Brushes require careful attention. They may be sterilized by boiling for five minutes in water containing 1 per cent. of washing soda. They should be kept in 1 : 1000 bichloride solution.

Instruments are sterilized by boiling for five minutes in soda solution, in a covered vessel. The addition of the soda prevents formation of rust.

Dressings are rendered absorbent and sterilized by steam. Strong antiseptic agents in dressings are objectional from their action in the skin. Dressings may also be sterilized by boiling in soda or potash lye.

The use of Florida sponges was recommended, as owing to their cheapness they can be used once and then thrown away. Boiling of sponges is to be condemned. Sponges are best prepared by heating, followed by immersion in dilute muriatic acid. Acid is removed by washing. Then immersed in water for two days to permit the spores to germinate. Each sponge is then kneaded in hot water for one minute with potash or soft soap. They are then placed in 5 per cent. carbolic solutions for 24 hours. As a substitute for the large flat sponges used in laparotomy he recommended the substitution of pads of absorbent gauze.

In operating, few instruments, sponges and assistants should be employed. The dissections should be clean, the tissues being cut rather than torn. Irrigation should not be employed except when special indications present.

In the abdominal cavity irrigation was condemned. When the peritoneal cavity is contaminated by pus, etc., simple wiping away of the matter is sufficient.

In perfectly aseptic operations, no drainage is required. Iodoform gauze can often be substituted for the use of tubes. Drainage by tubes is required where there is progressive suppuration.

In combating septic morbid processes, mechanical measures such as incision, drainage and irrigation are of more importance than chemical measures.

DISCUSSION.

Dr. J. Collins Warren, Boston, described the details of operative surgery as practiced in the Boston City Hospital. The Massachusetts General Hospital and the Children's Hospital.

Dr. J. William White, Philadelphia, thought that the time had not yet arrived when the use of antiseptics could be dispensed with. He preferred an antiseptic dressing in all cases except where the wound is absolutely sterile and where no discharge is to be expected. While in a general way he agreed as to the value of mechanical measures in cleansing the skin he saw no good reason for throwing aside entirely the

use of the weaker chemical solutions. There are so many cases in which we can not be sure that the wound is aseptic, antiseptic dressings become of importance. He had tried the gauze substitute for sponges in abdominal work, but had found it objectional from the fact that when the gauze remains long in contact with the intestines, threads of *the gauze adhere to the intestine.*

Dr. Joseph Ransohoff, Cincinnati, said that in some cases it was absolutely impossible to render the part aseptic and cited cases illustrating this point. In cases where it becomes clear that the wound is infected, he removes the dressings and soaks the part in hot water. He had discarded the use of sponges altogether. In the majority of cases he employs the aseptic dressing, but could see no harm in the use of antiseptic dressings. Dressings, etc., in private practice may well be sterilized by heating in the oven. He thought that tight closing of the wound should be practiced oftener than it now is. Drainage is rarely used except in wounds already septic. He often uses catgut for drainage. In the septic cases he thought that probably the surgeon was often responsible for the infection of the wound. By clean incisions, cutting far away from the disease, and by not using the sharp spoon too freely, infection of the wound in suppurating cases can often be prevented.

Dr. E. M. Moore, Rochester, asked what objection was there to irrigation? In amputations for instance irrigation in the 1 : 1000 bichloride solution affords a ready means of removing clots, etc. The clots are removed and the wound can be left in a dry state. If this irrigation does no harm, why not use it? Dr. Gerster had condemned it, but he had not given his reasons for such condemnation. In certain cases of abdominal section, especially, where there was oozing of blood the use of hot irrigation of aseptic water was of great service.

Dr. Gerster, in including, said that he did not condemn antiseptic methods. He employed both methods. In its proper place asepticism is infinitely superior to antisepticism, but the cases must be properly selected. Teachers must be careful not to go too far in advance of the rest of the profession. Those who have not learned the details should be warned to stick to the older methods and work up the higher methods.

THE SURGERY OF THE SPINE, BY J. WILLIAM WHITE, M. D., PHILADELPHIA.

The conditions discussed were, congenital deformities, tuberculosis of the spine, neoplasms and traumatisms. Under the first head, spina bifida is the only condition requiring consideration. In this, injection by an iodo-glycerine solution offers the greater prospect of ultimate recovery with the least immediate danger.

In tuberculosis of the spine the indications for interference are the evacuation of pus, removal of a sequestram or of a focus of carious bone, and relief of the cord from pressure.

There are records of 14 operations upon the bodies of vertebræ for abscess, with 8 cures, 5 cases improved and one death which had no relation to the operation. There have been 40 cases of operation on the spine for the relief of pressure. In 22 there was either improvement or cure. The effect of suspension in the treatment of Pott's paralysis has been so favorable that it should occupy a prominent position.

Conclusions in regard to operative treatment of spinal tuberculosis with symptoms of pressure on the cord were:

1. The paralysis in Pott's diseases is not as a rule, due to a transverse myelitis or hopeless degeneration and is not usually due to the pressure of the carious or displaced vertebræ; but is in the majority of cases the result of an external pachymeningitis which results in the formation of an extra-dural connective tissue tumor.

2. Speaking generally, a favorable prognosis is to be given, especially in children in cases of Pott's paralysis, in which the abscess, if any exists, can be evacuated; the treatment by extension and with plaster jacket can be employed and the patient can be put under the most favorable hygienic conditions.

3. In cases in which all this has been tried unsuccessfully or in those which disease is slowly but steadily progressing to an unfavorable termination; where with more or less complete loss of motion and sensation below the level of the lesion, there are incontinence of urine and fæces and the development of bed sores, and especially when acute symptoms threaten life, resection becomes entirely justifiable.

4. Operation having been decided upon for any or all of the above reasons, the prognosis will be favorable in direct proportion to the youth and strength of the patient, the absence of generalized tuberculosis and the nearness of the lesions to the base of the brain.

5. When the tuberculosis process affects the arches, and there is paraplegia, we may

sometimes operate, hoping not only to free the cord, but at the same time remove the focus of disease. This double indication may also be fulfilled in those cases where, without bony disease there is posterior pachymeningitis or a tuberculoma occupying the canal.

6. If the lesion of the bodies of the vertebræ is in the lumbar region at a point where these bodies are accessible, it might be possible in certain cases to expose the cord from the back, by removal of the laminæ, with the object not only of removing pressure, but of reaching and taking away the diseased bone and tubercular granulation.

7. In tuberculosis of the body of a vertebræ and compression of the cord by anterior pachymeningitis, we can fulfil only one indication—liberate the cord from pressure. We should operate only in grave cases where acute compression, the appearance of respiratory complications, the rapid development of degenerative processes force us to interfere, or where the course of a chronic case is steadily toward a fatal termination, although no advanced visceral tuberculous lesions are present.

In regard to neoplasms, it was said that every case of focal spinal lesion, thought to depend on a tumor and not distinctly a malignant and generalized disease, should be regarded as amenable to operative interference, no matter how marked the symptoms of pressure may be, nor how long continued.

Traumatism.—The indications and contra-indications for trephining in spinal fractures are based on the following points: 1. The nature of the vertebral lesion and the nature and extent of the medullary lesion. 2. The time which has elapsed since the traumatism. 3. The regional level of the medullary lesion.

The following conclusions were presented:

1. Some objections urged against operative interference in spinal traumatisms—*i. e.*, hæmorrhage, frequency of absolute destruction of the cord, pressure from inaccessible fragments of bone, etc., have been shown to be unsupported by clinical facts; others were largely due to a well-founded dread of *a*, the shock, in those cases operated on in pre-anæsthetic times, and *b*, consecutive inflammation, suppuration, and pyæmia in pre-antiseptic periods.

2. Some results of recent operative interference in properly selected cases of fractures of the spine are encouraging and should lead to the more frequent employment of resection of the posterior arches and laminæ; *a*, in all cases in which depression of those portions either from fracture or dislocation is obvious; *b*, in some cases in which, after fracture, rapidly progressive degenerative changes manifest themselves; *c*, in all cases in which there is compression of the cauda equina from any cause, whether from anterior or posterior fracture or from cicatricial tissue; *d*, in the presence of characteristic symptoms of spinal hæmorrhage, intra or extra medullary.

3. Operation is contra-indicated by a history of such severe crushing force as would be likely to cause disorganization of the cord. The question which will remain in doubt previous to operation will usually be that of the extent of damage done to the cord, and the possibility of its taking on a reparative action. As to this, the safest rule is that which has been formulated by Lauenstein, namely, that if after the lapse of six or ten weeks there is incontinence of urine or incontinence of fæces, and especially if there is also the development and spreading of bed-sores, but little is to be hoped for from the unaided efforts of nature. If, however, these symptoms are absent and if there be the least improvement it will be proper for the surgeon to delay operative interference still longer.

DISCUSSION.

Dr. H. H. Mudd, of St. Louis, dwelt upon the importance of remembering the liability of severe shock in these spinal operations. He reported three cases of bullet wounds of the spinal column, one of which ended fatally.

Dr. John B. Roberts, Philadelphia, insisted that injuries and diseases of the spine of a surgical kind should be treated as we treat injuries of the cranial cavity. Cases of Pott's disease, with angular curvature, have been referred to, but sufficient stress has not been laid upon the fact that many of these cases with motor paralysis improve under ordinary remedies, the inflammatory exudation being absorbed. In traumatism of the spine we should explore the spine as we should explore the brain. In severe injuries, with fracture, spciulæ of bone are often driven down on the cord.

Dr. J. J. Putnam, of Boston, thought that the dangers of inflammation had not been sufficiently dwelt upon. Some cases of spinal injury after one to four years show some improvement. In such cases an operation may add to the improvement.

Dr. James M'Cann, reported two cases of spinal injury in which operation had been

performed. In one death followed. In the other there was great improvement.

THE TREATMENT OF TUBERCULOSIS OF BONES AND JOINTS BY PARENCHYMATOUS AND INTRA-ARTICULAR INJECTIONS, BY DR. J. N. SENN, CHICAGO.

The following conclusions were presented.

1. Parenchymatous and intra-articular injections of safe anti-bacillary substances are indicated in all subcutaneous tubercular lesions of bones and joints accessible to this treatment.

2. Of all substances, so far employed in this method of treatment, iodoform has yielded the best results.

3. The curative effect of iodoform in the treatment of local tuberculosis is due to its anti-bacillary effect and its stimulating action on the healthy tissues adjacent to the tubercular product.

4. A ten per cent. emulsion in glycerine or pure olive oil is the best form in which this remedy should be administered subcutaneously.

5. The ethereal solution should never be employed as it is liable to cause necrosis of the tissues overlying the abscess or iodoform intoxication.

6. Tubercular abscesses and joints containing synovial fluid or tubercular pus should always be washed out thoroughly with a three to five per cent. solution of boracic acid before the injection is made.

7. Injections should be made at intervals of one or two weeks and their use persisted in until the indications point to the cessation of tubercular inflammation and the substitution for it of a satisfactory process of repair or until the result of this treatment has shown its inefficacy and indications present themselves of the necessity of resorting to operative interference.

8. If the treatment promises to be successful, symptoms pointing to improvement manifest themselves not later than after the second or third injection.

9. In tubercular empyema of joints and tubercular abscess, gradual diminution of the contents of the joint or abscess at each successive tapping, lessening of the solid contents of the fluid and increase of its vicidity, are the conditions which indicate unerringly that the injections are proving useful and that in all probability a cure will result from their further use.

10. Moderate use of limb is compatible with this method of treatment, provided the disease has not resulted in deformities which would be aggravated by further use of the limb. In such cases correction of the deformity should be postponed until the primary joint affection has been cured by the injections.

11. Para-chymentrim and intra-articular medication with anti-bacillary material, has yielded the best results in tubercular spondylitis attended by abscess formation and tuberculosis of the knee and wrist joints.

12. This treatment may prove successful in primary osseous tuberculosis followed by involvement of the joint, provided the osseous foci are small.

13. Extensive sequestrums of articular ends with secondary tubercular synovitis, always necessitates resection, but preliminary treatment by iodoform injection into the affected joints constitutes a valuable preparatory treatment to the operation and adds to the certainty of a favorable result.

14. In open tubercular affections of joints, incision, scraping, disinfection, iodoformization, iodoform gauze tampon, suturing and subsequent injection of iodoform emulsion is advised, and yields excellent results, and should be employed in all cases in which a more formidable operation can be avoided.

15. Balsam of Peru ranks next to iodoform in the treatment of tubercular affections of bone and joints, and if the latter remedy for any reason can not be employed or has failed in effecting the desired result, it should be given a fair trial, if operative treatment is not urgently indicated. Adjourned.

SELECTED FORMULÆ.

ASTHMA POWDER.

℞

Pulv. stramonii fol.	grammes xxxij.
Pulv. belladonnæ fol.	" xxxij.
Pulv. potass. nit.	" iv.
Pulv. opii	gramme j.

Burn a little and inhale the fumes.—*Buffalo Med. Jour.*

REMEDY FOR MIGRAINE.

℞

Caffeini citrici	grammes 0.9
Phenacetini	gramme 0 1
Sacch. lactis	grammes 0 2

M. Ft. chart. No. 5. Sig. One powder every two hours until relieved.

—*Med. Age.*

TO PREVENT SORE NIPPLES.

Apply a mixture of tannin and glycerine, two drachms to the ounce, daily during the last month of pregnancy. This renders the nipples tough, but elastic.—*Annals Hygiene.*

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LEADING ARTICLE.

AN ANALYSIS OF 1008 CASES OF SCARLET FEVER ADMITTED INTO THE SOUTH-WESTERN FEVER HOSPITAL DURING THE YEAR 1890.

Since the publication in 1887 of the monograph of Dr. Astley Gresswell on the *Natural History of Scarlet Fever*, in which was studied 375 cases of scarlet fever treated in the South-Western Hospital, of London, we have been fortunate in having been furnished from this same Hospital some exceedingly valuable data. Dr. F. Foord Caiger, believing that a brief record of a considerable number of cases of this disease successfully treated under conditions favorable for observation would be of value, contributes, in the *Lancet* of June 13, 1891, an analysis of 1008 cases admitted to the Hospital in 1890. In this paper he considers: (1) Seasonal Prevalence, (2) District Prevalence, (3) Age, (4) Sex, (5) Mortality, (6) Complications, (7) Period and Extent of Desquamation, (8) Treatment.

I.—SEASONAL PREVALENCE.—This seasonal prevalence of the disease, as evidenced by the monthly admissions, was in accord with that observed in London during the last seventeen years. The admissions were at their lowest during the first quarter of the year. A slight rise was observed in May, and was maintained during the summer. A rapid increase was noted in September, and reached its highest point in October. After this the numbers fell rapidly until the end of the year. The curve of scarlet fever admissions into this hospital in the main corresponds with that of the total admissions into the hospitals of the Metropolitan Asylums Board. They numbered for the year 6565, and represent about 43 per cent. of the notified scarlet fever in London.

II.—DISTRICT.—Of these cases the parish of Lambeth contributed 585, or 58 per cent.; Wandsworth, 334, or 33 per cent.; other parishes, 89, or 9 per cent. The district from which they are drawn is not without its influence upon the case mortality. It is a

recognized fact that the poverty-stricken inhabitants of the poorer neighborhoods, in consequence of their lower vitality, show a much weaker power of resistance to the attack of scarlatina than those who are better housed and better fed. In this respect, though a large proportion of the patients came from the poorest parts of Vauxhall, Waterloo, and Battersea, they were not so badly off in the aggregate as those entirely drawn from the East-end districts. With this reservation there was nothing noteworthy in the type of disease observed throughout the year.

III.—Age Distribution.—The largest number of admissions fell within the second quinquennium of life; 449, or 44.5 per cent., of the total were between five and ten years. The first quinquennium furnished the next largest number; 314, or 31.1 per cent., were aged from one to five years. If these groups be examined more in detail, it will be seen that the number of admissions regularly increased with each year of life up to the fifth year, at which age they reached their maximum, after which they fell somewhat more gradually until ten years was reached. After ten years each quinquennium showed a progressively decreasing number until forty years was reached, after which age only two were admitted. It will be seen that after ten years the drop in the number of admissions at each quinquennium until twenty-five years was reached was considerable. These charts may be taken as characteristic of the total scarlet fever admissions under the Metropolitan Asylum Board for many years past.

IV.—Sex.—The numbers for the two sexes were nearly equal. Males, 509; females, 499. Under five years the males exceeded the females in the proportion of 7 to 6; whereas over five years the preponderance was slightly in favor of the females.

V.—Mortality.—The death-rate, calculated according to the Registrar-General's formula, comes out at 4.67, a very satisfactory figure when it is remembered that the mortality was 32.48.

VI.—Complications.—The following figures give the percentage incidence of the various complications observed in cases completed during the year arranged in their order of frequency:—Otitis occurred in 12.9 per cent. of cases, adenitis in 7.1 per cent., rhinitis in 6 per cent., eczema in 3.3 per cent. albuminuria (simple) in 3.1 per cent., ulcerative stomatitis in 2.8 per cent., nephritis in 2.7 per cent., rheumatism in 2.7 per cent., bronchitis in 2.08 per cent., conjunctivitis in 1.35 per cent., tonsillitis (secondary) in 1.24 per cent.

Otitis, attended with a purulent discharge, was the most frequent complication. It occurred in 124 cases, mainly in young children. The younger the child the greater its apparent liability to the disease. In most instances it began with earache, and more or less fever and restlessness, lasting from one to three days, which symptoms rapidly subsided on the appearance of the discharge. Though the majority were due to otitis media with perforation of the tympanum some few were apparently caused by a simple inflammation of the external auditory canal. There seemed to be a direct connection between the severity of the scarlatinal attack and the early development of the affection. The milder cases were attacked less frequently, and usually at a later period of their illness, occasionally several weeks after the subsidence of the fever. The continuance of the discharge varied from three or four days to three or four months. Most cases were clear within two weeks. All were detained in Hospitals until the discharge had entirely ceased. This was usually effected by means of simple treatment. In three instances suppuration occurred over the mastoid process, but by means of early incision down to the bone possible suppuration of the mastoid cells was averted. In only one case did there appear to be very marked impairment of hearing at the time of discharge from the Hospital, but to obtain accurate knowledge on this point was difficult owing to the extreme youth of the majority of the patients. Only one case of otorrhœa occurred in a patient over ten years of age. No case of meningitis or

pyæmia developed during their stay, and as all discharges were cured before the patients were sent home, there is some hope for an immunity in the future. It is a point worth bearing in mind that extreme fetor of discharge in otitis media is not necessarily dependent on bone disease.

Adenitis occurred in 69 cases, and was the next in order of frequency. The adenitis here alluded to is a distinct affection, and does not include the glandular swelling directly associated with the faucial inflammation which, though in some instances so slight as to be hardly noticeable, in others assumes such proportions as to deserve the name "bull neck," a symptom of the gravest omen, being associated with extensive ulceration of the fauces, a fetid discharge from mouth and nose, and symptoms of a pyæmic type. The affection referred to is a rapid swelling of one or more of the glands of the neck, usually at the angle of the jaw, sometimes beneath the sterno-mastoid, attended with a fresh rise of temperature, quite apart from the original febrile attack, from which it may be separated by an interval of from one to three or more weeks. It either more or less rapidly resolves, or it suppurates, often with little or no reddening of skin or periadenitis. Of the 69 cases, 17, or about one-third, suppurated, necessitating surgical interference.

Rhinitis, with a more or less purulent discharge, occurred in 58 cases. It was frequently associated with otorrhœa, and was relatively more common in young children. In recording instances of this complication Dr. Caiger has endeavored to eliminate as much as possible those cases in which the discharge appeared in the first week, during the height of the fever, at which time, in common with several others, it is a *symptom* of grave prognostic value. It is always a difficult matter to determine where the line should be drawn between symptoms and early complications. It would be well if the field could be cleared of any such assumed distinctions, but in the present state of our knowledge some such empirical distinction is at least a matter of convenience.

Eczema was noted in thirty-two cases. Its most frequent seat was at the junction of the alæ nasi and upper lip, behind the ears and on the ear itself, especially at the external auditory meatus and within the groove of the helix. It seemed in many instances dependent on the presence of an irritant discharge from the nose or ear, and, from the fact that it is very difficult to prevent young children from picking a sore spot, its extension in an impetiginous form to neighboring parts of the face frequently occurred. Young children showed a greater liability than older ones, and its incidence was most marked in cold weather and on patients taking a meat diet. In some cases it necessitated a prolonged detention in Hospital. Several cases of eczema capitis were very tedious in their convalescence.

Albuminuria was recorded in thirty cases. This small number does not pretend to include all cases in which faint and transient traces were present at one time or another. Those showing a faint cloud during the pyrexial stage of the attack and those cases in which a faint haze with picric acid was observed for not more than three consecutive days are not included in the list.

Dr. Gresswell states that he found albumen in the urines of 93 per cent. of his cases, and in the months of October and November in every one, the urines usually being tested every other day, and a neutral saturated solution of picric acid the reagent employed. Difference of season and epidemic type may doubtless, in some degree, account for the discrepancy; moreover, the individuality of the observer and the nature of the test he employs are not without their influence. The cases were treated in the same wards, and with practically the same environment. The only variation lay in the matter of treatment. The diet *scale* remained the same in the two series. Dr. Gresswell's ordinary cases appear to have been kept on "low diet," consisting of beef-tea, milk, and two eggs (in the case of children over ten years four eggs) for a period of three weeks, during which time no baths were given. In the cases under discussion in this paper the

patients were put on a meat or fish diet with no eggs (in the case of children over ten one boiled egg,) and were ordered baths on the day following that on which the temperature had reached the normal. This usually occurred about the end of the first week. Both series of patients were kept in bed for three weeks after admission. Their treatment, therefore, during the second and third weeks differed in this respect. Dr. Gresswell's cases were taking a diet rich in highly diffusible albumen without any baths; Dr. Caiger's cases own a much less proportion of easily diffused albumen and frequent baths, and it was during the first three weeks that Dr. Gresswell found albumen in 100 per cent. of of his October and November cases.

With the exception of a slightly higher rate during the October and November cases, the albuminuria has been spread nearly uniformly over the year. Young children were affected in larger proportion than their elders; 93 per cent. occurred in children under ten, the relative admissions for that age period being 75.

Ulcerative Stomatitis occurred in twenty-seven cases. They varied in severity from the mildest form of surface ulceration on the lips, tongue, and buccal surface of cheek, arising in connection with spongy gums and carious teeth, to a rapidly necrotic form of deep ulceration, attended with extensive sloughing of cheek and gum. In this latter form the teeth soon become loose and fall out. Cases of all degrees of severity are attended with a distinctive fetor of breath, a dirty coated tongue, and rapid incrustation of the teeth with a black putrefactive deposit. Under suitable treatment, and, in the severe cases, very radical treatment, all recovered. Half-measures are of no use. If the disease does not almost at once yield to mild measures, fuming nitric acid, if necessary under chloroform, should be freely applied to the whole of the diseased surface. Within thirty-six hours the whole process will have changed.

Nephritis supervened in twenty-six cases. Though nearly equally distributed throughout the year, they were relatively slightly more frequent during the summer months. Twenty-three of these cases occurred within the first three weeks of illness. The incidence of nephritis was therefore very small—viz., 2.7 per cent. This is in marked contrast with the statement which appears in the article on "Scarlet Fever" in Roberts' Theory and Practice of Medicine, 1890—viz., that the most frequent and important complication and the one that requires special notice is acute nephritis and its consequences.

Rheumatism of sufficient distinction to cause a rise of temperature, and obvious joint tenderness was seen in twenty-six instances. In two instances the pericardium was affected, in two an apparently valvular murmur developed, but one of these had probably been the subject of antecedent endocarditis. Pleurisy in connection with rheumatism was seen in only two instances. The joints most frequently affected were those of the extremities, the arms more frequently than the legs, and the wrists, elbows, and ankles, than the shoulders, hips, or knees.

Scarlatinal rheumatism most frequently occurs at the end of the first or beginning of the second week, at a time when the rash is just disappearing and the temperature reaching the normal. There seems to be a greater liability in patients who have had a copious rash, followed by profuse desquamation. It is comparatively more frequent in adults and in older children, and shows but little tendency to affect the heart, pericardium, or pleura. Its incidence seems to be independent of season. It is relatively as frequent during the summer and autumn as during the colder months.

Bronchitis occurred in twenty instances. It was mild in character, and almost invariably appeared during the febrile stage. It was relatively more frequent during the cold weather.

Conjunctivitis of a mild muco-purulent type occurred in thirteen instances. It was mainly an affection of convalescence, and readily yielded to treatment. No case terminated in corneal ulcer or serious eye mischief.

Secondary tonsillitis sufficient to cause a

rise of temperature occurred in twelve cases. They all made a rapid recovery.

It is satisfactory to note that in no instance did diphtheria, either faucial or laryngeal, make its appearance among the scarlatina convalescents.

Relapse or recrudescence of the disease was seen in six instances. Great care should be taken in recording such instances to eliminate all cases in which there exists any reasonable doubt as to the genuineness of either attack, as it may be suggested that either the initial or the second one may not have been an instance of true scarlatina. In four cases out of the six the symptoms in each attack were so distinctive that if their genuineness be in dispute it can only be urged that we have, then, no reliable criteria of an attack of scarlatina. Rash, throat, tongue, the course of the temperature and peeling were in each instance characteristic of the disease. Three of the relapses occurred during the second and third week of illness—viz., on the twelfth, fourteenth, and seventeenth days; two in the fifth week, and one in the seventh week. In three of them—viz., those occurring on the twelfth day, fifth week and seventh week respectively, the relapse, in one case complicated with nephritis, was of greater severity than the primary attack.

VII.—Desquamation.—The period and extent of desquamation varied in different cases within wide limits. In some instances, mainly in adults and very young children, it was completed in less than six weeks. In others it was prolonged to twelve, or even sixteen weeks. With the exception of a few in whom a condition of xeroderma was natural, no case was sent home until all sign of peeling had disappeared, discharges from mucous cavities and sores had ceased, and the urine been for several weeks free from albumen. In infants, as is usual, peeling was but slight and transient. The average detention in hospital was slightly over nine weeks.

VIII.—Treatment.—In the large majority of cases no special treatment was indicated, symptoms being dealt with as they arose. In those with severe throat and glandular affection, frequent syringing out of the fauces and nares with a solution of chlorine or boracic acid was most useful as serving to clear away offensive secretions and lessen discomfort. In such cases the frequent application of hot poultices was of great service. In restlessness and sustained pyrexia cold and tepid spongings were useful to promote sleep, and sulphonal in some instances proved a valuable hypnotic. The cases were treated in bright and well ventilated wards, maintained at a temperature of 56° to 60° F., the average cubic space per bed being about 2,000 ft. The diet during the pyrexial stage consisted of milk, beef tea, eggs, and ice, after which a more solid diet of milk pudding, bread and butter, with fish or meat, was given, and at the same time baths were ordered on alternate days. Stimulants were only employed in severe cases, usually in the form of brandy or champagne. Uncomplicated cases were allowed to get up at the end of the third week, and except in wet weather, sent out of doors for several hours usually each day, due care being taken that flannel was worn next the skin and the clothing otherwise warm and generally sufficient. Complications were dealt with as they arose, and, with the exception of otorrhœa, were rarely seen after the third week.

With reference to the treatment of scarlatinal nephritis, Dr. Cagney was not in the habit of using drugs in ordinary cases. A death from scarlatinal nephritis in his hands is an event of the greatest rarity. In this series of over 1,000 cases of scarlatina only one death occurred from scarlatinal nephritis, the child being admitted with nephritis, and dying a few days after in convulsions.

Correspondence.

GASTRALGIA CURED BY ARSENIC.

To the Editor of the Medical and Surgical Reporter:—Ten drops of Fowler's Solution of Arsenic three times a day for three days would probably have cured the case of gastralgia reported by Dr.

Alice McLean Ross in a previous number of the REPORTER. It will now in all probability prevent its recurrence. This is what cured (in 6 drop doses) Dr. Valentine Mott of severe neuralgia of the stomach, occurring immediately after a four months course of lectures, his last, in his 78th year.

For fissured nipples I notice several remedies in your journal.

The worst case I ever saw, was cured speedily by the application of oil of eggs, immediately after nursing, to the dried nipple, then covered with a bees-wax shield to protect it from the clothing. This I used successfully at home, and in many other cases after all other things failed. This is Sherman's Celebrated Nipple Oil. I gave him the receipt which is as follows: Break two fresh eggs in a frying pan, wiping the pan clean of grease, place it over a smart coal fire. They will cook, dry, char and remain like charcoal, for perhaps an hour or more, then turn to a blackish antiseptic oil, which will not get rancid in twenty years; this I know by leaving a small bottle open from which I used the oil.

EDW. VANDERPOOL, M. D.

BOOK REVIEWS.

PULMONARY CONSUMPTION, A NERVOUS DISEASE: considered as such from a practical, a clinical, and a therapeutic standpoint. By THOS. J. MAYS, M. D, Professor of Diseases of the Chest in the Philadelphia Polyclinic and College for Graduates in Medicine, etc. Geo. S. Davis, Detroit, Mich., 1891. 16 mo., 185 pp. Paper, 25 cents; Cloth, 50 cents.

In this volume of the Physician's Leisure Hour Series, the author endeavors to show that the principle causes and nature of pulmonary consumption are of direct neurotic origin. In other words, he looks upon consumption as a neurosis, and evidently wishes to discard entirely the bacillary origin of this disease. His chief reason for belittleing or abolishing a dependence on bacilli is apparent in his preface, in which he states that "Any one who takes a calm and impartial retrospect of the whole situation must own that never was an *ignis fatuus* pursued which left more promises broken and greater anticipations unfulfilled than the bacillus theory in so far as it stands related to the therapeutics of this disease." To decry a theory of the origin of a disease because that theory has not benefited the therapeutics of the disease is illogical and an absurdity. For the same reason the author's asserted neurotic origin may be attacked.

To any one who will unbiasedly read these pages, it will be apparent that the author starts out with such preconceived opinions that he does not fairly consider the data before him; but, indeed, really makes deductions which are directly opposed to the matter he recites. This assumption of the neurotic origin of tuberculosis seems to us to be one of the familiar instances, where, because a certain lesion was found in one case, the argument is that a similar lesion must exist in all cases of the same class. There are no doubt cases of pulmonary tuberculosis primarily of neurotic origin, so, too, are there those primarily of bacillary origin, but to say that consumption is in all cases primarily a neurosis, or, on the other hand, that all are primarily of bacillary origin is absolutely unwarranted.

The author's arguments rest on such unstable ground that it seems apparent he will have few adherents to his beliefs.

ESSENTIALS OF PHYSIOLOGY, ARRANGED IN THE FORM OF QUESTIONS AND ANSWERS, PREPARED ESPECIALLY FOR STUDENTS OF MEDICINE, BY H. A. HARE, B. Sc., M. D., Professor of Therapeutics and Materia Medica in the Jefferson Medical College, of Philadelphia, etc. Third edition, thoroughly revised and enlarged by the addition of a series of handsome plate illustrations taken from the celebrated "*Incones Nervorum Capitas*" of Arnold. Philadelphia; W. B. Saunders, 12 mo., 193 pp., cloth $1; interleaved for taking notes, $1.25.

In this edition of this excellent compend we find as the chief change the insertion of a number of plates which the student will find of great benefit in the studies of the deep and superficial origins, the modes of exit, the distribution and the functions of the cranial nerves. The plates are well executed, and the book creditable both to author and publisher.

ESSENTIALS OF ANATOMY AND MANUAL OF PRACTICAL DISSECTION, TOGETHER WITH THE ANATOMY OF THE VISCERA. Prepared especially for students of medicine, By CHARLES B. NANCREDE, M. D., Professor of Surgery and of Clinical Surgery in the University of Michigan, etc. Fourth edition, revised and enlarged by an appendix containing *Hints on Dissection*, by J. Chalmers Da Costa, M. D., Philadelphia; W. B. Saunders. 12 mo., 388 pp. Price, in cloth, $2; sheep, $2.50.

This edition presents evidences of decided and gratifying changes. The former editions have been very popular, and in the present issue an effort has been made to extend the usefulness of the work by the addition of a

series of 30 excellent full-page lithographic plates, in colors, taken from the works of Maclise, Savage, Nuhn and Hirschfeld. Besides these there are 188 fine wood cuts. The student will find this a very handy and trustworthy work in the dissecting room.

PERISCOPE.

THERAPEUTICS.

SOMNAL.

1. Somnal induces sleep through a direct action on the brain.

2. The sleep is preceded by disturbances in co-ordination of movements, which is dependent upon the drug's action on the central nerve system.

3. Somnal diminishes the irritability both of the psychomotor centres and the spinal cord.

4. It lowers reflexes, acting directly on the spinal reflex centres.

5. When applied locally, it depresses the excitability of the peripheral endings of sensory nerves.

6. It does not seem to exercise any influence on the peripheral terminations of motor nerves.

7. It lowers the blood-tension, the fall resulting from the drug acting both on the vasomotor centres and the vascular walls themselves.

8. It manifests an inhibitory influence on the central, but increases the irritability of the peripheral endings of the vagus.

9. It decreases the excitability of the respiratory centres.

10. It lowers the bodily temperature.

11. When administered in toxic doses, the drug kills the animal through inducing asphyxia.

12. On the whole, with regard to its physiological effects, somnal stands midway between chloral hydrate and urethan.

13. The action of somnal on the heart is a trifle less depressing, and hypodermic injections of the drug slightly less painful than those of hydrate of chloral.

14. In comparison with urethan, somnal cannot possibly claim even those advantages, since the former *a.* does not manifest any injurious influence on the heart; *b.* does not depress the arterial pressure; *c.* has a more unpleasant taste; *d.* even a 30 per cent. solution of urethan does not cause any pain in hypodermic injections.

15. Whatever somnal might prove—a definite chemical compound, or simply a solution of chloral and urethan in ethylic alcohol—all the same the new hypnotic does not offer any appreciable practical advantages over its components.

16. In view of *a.* the latter circumstance, *b.* the mysteriousness of the chemical composition, and *c.* the fact that the proprietor keeps in darkness and monooplizes the preparation, somnal should be discarded from the list of legitimate therapeutical means.—*St. Louis Med. and Surg. Jour.*

THE ROLLER BANDAGE FOR THE PAINS OF TABES DORSALIS.

Dr. Joseph Leidy publishes a note in the *Medical News* for the purpose of drawing attention to the results of a simple method for the relief of pain during the course of spinal disease, and especially tabes dorsalis.

Warmth, in the form of the warm bath, has long been recognized as of considerable utility in the treatment of this symptom.

He has frequently observed the relief afforded by the firm application of a roller bandage in the spasmodic and painful conditions so common in the extremities following traumatism. It occurred to him that the application of such a bandage (flannel or hose) to the part the seat of pain in locomotor ataxia might be of some service in mitigating the suffering. He found that the firm application of a bandage (flannel) from the toes to the upper third of the thigh was attended with great relief. During the past six months this method of treatment has been employed with most encouraging results. For the girdle pains a bandage, similar to the abdominal binder, firmly applied at the level of the abnormal sensations, afforded almost instant relief. The cases under observation had been treated with galvanism, with absolute rest, and the usual therapeutic measures, the majority of which had failed. The usefulness of this method depends principally upon the pressure and warmth that the bandage affords, combined with rest. It is worthy of further trial, if only as a substitute for morphia. In one case the removal of the chest-binder was in several hours followed by a return of the girdle sensations. Two other patients invariably suffered a return of pain in the lower extremity on the removal of the bandage. In suitable cases the elastic stocking may, with advantage, be substituted for the bandage, as it does not interfere with locomotion.

The application of a roller bandage about the seat of pain was equally useful in several instances in which the area of pain was localized.

The method of treatment indicated will commend itself for its simplicity, with the advantage of acting as a substitute for drugs.

INFLUENCE OF DRUGS ON THE HEART.

Professor German Sée's second paper on this subject was read at the last meeting of the Academy of Medicine. He gave some further notes on the action of sparteine, digitalin, iodide of potassium, caffeine, etc., explaining and adding to what was reported June 13. He likewise examined at length: 1. Strophantine, which is a very strong contracting agent; it only increases the heart's action indirectly and momentarily. 2. Convallamarine is a weak diuretic, producing extreme effects similar to digitalin; convallamarine and sparteine are indispensable auxiliaries and succedaneums to strophantine, iodide of potassium, and digitalin. 3. Lactose is a renal diuretic, without producing the least agitation on the heart and its vessels. The learned professor's ill health necessitated the postponement of the discussion which was to follow this paper.

THE ELIMINATION OF ANTIPYRIN.

The rapidity of elimination of antipyrin has been experimentally worked out by Perret and Givre (*Lyon Médical*, June 7, 1891). The marked tolerance of this drug by young children, and their almost complete exemption from the not infrequent accidents observed after its use by adults, have suggested the idea that elimination of this substance in children is much more rapid than in older patients. The presence of antipyrin in the urine can be detected by the addition of perchloride of iron, which forms a beautiful deep red color. This test is sufficiently delicate to show the presence of one part of the drug in 5,000 parts of urine. The results of this investigation show that (1) the elimination of antipyrin, in all doses, in both children and adults, commences at the same time—about three-quarters to one hour after ingestion; (2) the the child eliminates the same dose more rapidily than does the adult, and he, in turn, more rapidly than the old man. Seven and a half grains given to a child continue to appear in the urine for fifteen to twenty hours, while the same quantity in the adult requires twenty-four to thirty hours for elimination, and a somewhat longer time in an aged person. Larger doses considerably prolong the period of elimination. Sixty grains, in a single dose, administered to an adult, continued to appear in the urine for seventy-two hours.—*Univ. Med. Mag.*

SULFONAL IN AFFECTIONS OF THE NERVOUS SYSTEM.

Dr. Græme M. Hammond, in the *Jour. Nervous Mental Diseases*, writes: Sulfonal is one of the most serviceable drugs in the treatment of nervous diseases which modern chemical research has added to the pharmacopœia. It cannot, in any sense, be considered as a remedy which, by its persistent administration, causes the resolution of pathological conditions. It is a hypnotic, pure and simple. On account of its tastelessness, the refreshing, apparently natural, sleep which follows its administration, and the freedom from unpleasant after-effects, he regards it as a remedy of the highest order. Though he has frequently prescribed sulfonal in large doses nightly, he has never observed any tendency on the part of the patient to form a sulfonal habit.

Of course, being a hypnotic, its use is confined principally to those affections in which insomnia constitutes an important feature. He does not believe that sulfonal ever cures insomnia, except in rare instances. Where wakefulness, moderate in degree and in duration, has been induced by anxiety or worry, and still persists after the exciting cause has been removed, he has sometimes found that fifteen or twenty grains of sulfonal, given every evening for four or five consecutive days, entirely dissipates the insomnia without any other remedial measures being adopted. But it is also serviceable in the preliminary treatment of persistent insomnia. The remedies which relieve insomnia, by the arrest and removal of those morbid conditions which have developed the cerebral hyper-excitability, necessarily act slowly. Under the most favorable conditions, two or three days at least elapse before wakefulness gradually yields to sleep. In such cases a sufficient dose of sulfonal, given for two or three consecutive nights, insures that much-needed sleep which will be continued without the sulfonal when the effect of the remedies aimed at the morbid condition inducing the insomnia becomes manifest.

In certain forms or insanity, in which the constant mental activity frequently induces

nights of wakefulness, sulfonal can be used with benefit. It is far preferable to narcotics, as it secures the desired rest without any apparent pernicious after-effect.

The dose of sulfonal varies greatly for different individuals, depending principally upon the degree of insomnia and the condition of mental excitability. In mild cases, fifteen or twenty grains will be enough, but he has seen several cases in which fifty or sixty grains at a dose were required before even a moderate amount of sleep could be obtained. These cases were all sufferers from insomnia depending upon cerebral irritation of undoubted organic origin, such as epilepsy, cerebral tumors, etc.

There are certain individuals who undoubtedly evince a decided intoleration for sulfonal.

In one case, that of a woman, fifty years of age, who was suffering from insomnia coincident with cerebral embolism, the administration of fifteen grains of sulfonal was almost immediately followed by vertigo, stupor and marked delirium, which persisted for several hours. A few days later the same symptoms followed almost immediately after the same quantity of sulfonal was taken. As a usual thing the effects of sulfonal rarely show themselves until three or four hours after the drug is taken. It could not have been the age of the patient which caused the unpleasant symptoms, for he has frequently given doses of fifty or sixty grains to persons of sixty or seventy years of age. One case—a man, sixty-five years of age, who suffered from frequent epileptic attacks—took sixty grains of sulfonal nightly for a month without any unpleasant symptoms whatever. Another patient, after taking twenty grains of sulfonal, complained of similar symptoms to those previously mentioned, besides which the patient felt weak and suffered from vertigo for the following twenty-four hours. These are the only two instances he has met with in which any decided intoleration for the drug has been shown.

To obtain the best effects of sulfonal, it should be given as nearly in solution as possible. Hot water or hot milk are, in my opinion, preferable as vehicles for the solution or suspension of the drug. Sulfonal is readily soluble in alcohol, and it is often recommended, therefore, to give it dissolved in wine or in some other fluid containing alcohol. But alcohol, being a cerebral stimulant, is contraindicated in most cases of insomnia. It may be given dissolved in soup, in tea, or in coffee, and will be tasteless, unless the dissolving fluid contains grease, as soups frequently do, when a decidedly bitter taste will at once be remarked.

Sulfonal given in powders has in his experience proved more efficacious and efficient than when administered in the form of compressed tablets. Whether it is that the latter, being more insoluble than the former, pass into the lower portion of the alimentary tract before they become completely absorbed, he does not know; but he has frequently observed that when equal quantities of sulfonal, in tablets and in powders, have been taken by the same individual, that the duration of sleep produced by the powders greatly exceeded that induced by the tablets.

The cases in which sulfonal gives rise to unpleasant symptoms are so infrequent—only two such instances having come under his observation—that we may readily regard it as a safe and valuable hypnotic—not as a remedy which will cure insomnia, but as a temporary means of bringing refreshing sleep to an exhausted or over-excited brain.

INTRAVENOUS INJECTIONS OF SODA IN ANEMIA.

Castellino (*Gaz. d. Ospit.*, No. 20), at the clinic of Maragliano, at Genoa, has studied in cases of anemia the results of intravenous injections of from fourteen to sixteen ounces of a ¾ per cent. filtered solution of soda. The injections were well borne, though sometimes followed by slight fever. An hour after the injection the number of red cells and the percentage of hæmoglobin were reduced. This oligemia was transitory and proportional in degree to the quantity of fluid injected. At the end of from ten to twenty hours a decided increase in the number of blood-plaques and in the number and resistance of the red cells had taken place; the red corpuscles were, however, still pale; the hemometer detected little variation. In the course of four or five days the increase in the number of red cells became more conspicuous, the percentage of hæmoglobin remaining stationary. During this period the red corpuscles showed greater resistance to the serum than they did previously. At the end of from thirty to forty days the good effects of the injections had disappeared. In three cases the serum, which before injection had, on spectroscopic examination, contained a considerable quantity of hematin, became clear after injection. In a case of chronic malarial fever of quotidian type, the

injection was followed by a decline of 2° in temperature. Good results attended the injections in a case of intense chloremia and in one of purpura simplex. In both, the number of red corpuscles became doubled, the general condition improved, and there was an increase in body-weight.—*Wiener klinische Wochenschr.*, June 4, 1891.

MEDICINE.

NASAL REFLEXES.

Dr. F. C. Heath, in the *American Lancet*, says that the explanation of these reflexes is not altogether clear and satisfactory. There are several theories. Hack considers that hyperæmia is the essential condition of the nose causing reflexes. John Mackenzie attributes it all to certain sensitive areas—*i. e.*, the respiratory tract of the nose is the area of reflex action. Moure's theory is, that the reflexes arise from mechanical irritation in the nasal chambers. Bosworth adopts Hack's theory, but adds that "hyperæmia generally occurs in a patient of a decidedly neurotic temperament," and this temperament "is a prominent predisposing cause of a nasal reflex." Moldenhauer opposes Hack's theory, claiming that "nasal polypus and polypoid thickening, as well as atrophic rhinitis, are a source of reflex phenomena, in neither of which does hyperæmia exist." Bosworth denies this condition as far as polypi and polypoid thickening are concerned, holding that they are attended with vaso-motor paresis and distension of the vessels of the membrane; he also speaks of the rarity of reflexes in atrophic rhinitis. That they do sometimes occur in this condition, is evidenced by the fact that Frænkel and Schmaltz report facial neuralgia and vertigo in cases of atrophic rhinitis; Finne a case of neuralgia of the fifth nerve; and Gleason certain skin rashes. Rualt thinks they may be due to crust accumulations, but Bosworth attributes the reflex to impaired general nutrition.

This impairment of nutrition also takes place in obstructive lesions, and may account for many of the accompanying neuralgias.

Some of the diseases reported as reflexes are undoubtedly the direct results of nerve pressure or of the extension of inflammation from continuity of tissue. He is now treating a case of conjunctivitis, probable due to plugs retained in the nares too long, but whether the eye trouble is reflex or from extension of inflammation, is uncertain.

From this study of nasal reflexes, he thinks, we may safely draw these conclusions:

1. Nasal lesions often produce serious reflex diseases.

2. An examination of the nares should be made in all cases of obstinate neuralgias of the head and face.

3. An examination of the nares should be made in every case of asthma, and in all other spasmodic and paralytic nervous affections, before giving them up as hopeless.

4. An examination of the nares should be made in all ocular cases not yielding to ordinary treatment.

5. Proper nasal treatment should be instituted where lesions are found in the nose in connection with any of the neuralgias, spasmodic and paralytic nervous affections, and ocular diseases above reported, in the hope of relieving or curing the same.

INFLUENCE OF ACUTE FEBRILE DISEASE ON THE COURSE OF CHRONIC PHTHISIS.

Dr. A. Chelmouski reports a case (*Deutsche Medicinische Wochenschrift*, No. 14, 1891) from the wards of Professor Stolnikow, of Warsaw, in which an acute attack of erysipelas, occurring in a patient who was suffering from chronic phthisis, gave rise at first to exacerbation of the tuberculous affection, but subsequently to apparent recovery. The patient was a woman, aged 38, who had suffered for a long time from symptoms of chronic disease of apex of the right lung, bacilli being present in the sputum. Added to this there was very extended ulceration and tuberculous infiltration of the mouth and fauces. A sharp attack of erysipelas, presumably acquired from a patient in a neighboring bed, was followed by a decided increase in the symptoms of the pulmonary disease. With the subsidence of the erysipelas a marked improvement took place in the visible tuberculous disease in the mouth. The ulcerated patches became cleaner and smaller, and the points of infiltration gradually subsided and disappeared. Tubercle bacilli were no longer to be found, and by slow degrees the symptoms of the lung mischief passed away, until the patient in about six weeks was able to leave the hospital feeling perfectly well. Several observers have recorded the subsidence of syphilis and lupus after erysipelas, and a few instances of arrest of tubercle have been noted. An attack of typhoid fever may sometimes be followed by recovery from tubercle. An interesting example of this, in the person of a

professional colleague, is recorded. The patient not only lost all his previous tuberculous symptoms, but gained weight in a remarkable manner during the convalescence from the fever, the cough being reduced to a minimum. Without offering any special explanation of this striking improvement in the onward course of the tuberculous disease, the writer quotes the opinion of Gamaleia, von Fodor, and others, to prove that high temperature should not be regarded as a harmful thing in itself, but rather as an evidence of the destructive process that is going on in the blood to bring about the annihilation of the tuberculous virus. Presuming that a febrile state of blood is inimical to the spread of the tuberculous poison, the occurrence of an excessive febrile condition such as is produced during the course of erysipelas or typhoid might account for the cessation of the tuberculous process, and its rapid cure after the subsidence of the fever. In cases of long-standing disease, where the heart's action is enfeebled or its muscular structure degenerated, the result of the secondary fever may have no such salutary effect, but may simply increase the local disease and diminish the general recuperative power.—*Brit. Med. Jour.*

THE IMMEDIATE REPAIR OF LACERATIONS OF THE CERVIX UTERI.

After a study of this subject (*N. Y. Med. Jour.*) the conclusions reached by Dr. Barrows are that, under certain conditions, lacerations of the cervix uteri are unavoidable, that where they occur to any extent they should be repaired at once, and that this can be done easily without risk to the patient and with every prospect for a successful result. The objects aimed at by this procedure are—

1. To prevent hæmorrhage from the torn surfaces, but more particularly from the cavity of the uterus, by insuring complete and permanent contraction of the organ.

2. To prevent puerperal pelvic cellulitis, endometritis, metritis, salpingitis, oophoritis, and peritonitis, and their complications and sequelæ.

3. To restore the cervix to its normal condition and prevent the development of the conditions dependent on the formation of cicatrical tissue at the cite of the laceration.

4. To promote involution and prevent the evils dependent on subinvolution.

5. To remove at once a common source of septic infection.

NEW METHOD OF EXAMINATION OF THE DIGESTIVE ORGANS.

Dr. Sahli, of Berne, has adopted the following ingenious procedure for determining the condition of the digestive functions. A pill containing about three grains of iodide of potassium is enclosed in a round sheet of very thin gutta-percha paper, the free margins of which are twisted in form of a bag and then fastened by a firm moist cord of fibrine, about one-eighth inch thick. The ends of the cord are brought together by a thread. The rubber sheet should be well covered with talcum, so as to prevent adhesion of the opposed surface. To protect the bag during swallowing, it is enclosed in a gelatine capsule. The author's object was to determine the time required for the iodide of potassium reaction to manifest itself in the saliva under various physiological and pathological conditions, this depending upon the rapidity with which the fibrine cord was digested and the iodide set free from its envelope. It has been stated that the manifestation of the iodide of potassium reaction depended upon the qantity of free hydrochloric acid in the stomach, but Sahli's experiments tend to show that the quantity of contained acid exerts less influence than has been thought. Although in the majority of cases examined, patients whose stomachs contained free HCl. presented the iodide reaction in the saliva much more promptly than those having a deficiency of the acid, he met with several cases in which time of appearance of the reaction was about the same, independent of the presence or absence of acid. The administration of hydrochloric acid with pepsin in cases of deficient acid production had frequently little or no effect in hastening the manifestation of the reaction. In like manner the administration of soda and pancreatic ferments in these cases, for the purpose of initiating intestinal digestion in the stomach, had no effect in accelerating the appearance of the reaction, and sometimes even delayed it. The reason of this was found to be that the acid and pepsin, or the pancreatic ferments, remained for too short a time in the stomach to exert any digestive action, being partly absorbed and partly passed into the intestines.

The value of this method in demonstrating the condition of the digestive functions is shown by some experiments made by Dr. Henne regarding the influence of pepper on stomach digestion. He found by chemical examination of the gastric juice that pepper administered in doses of 2½ grammes before

meals had no essential effect upon the gastric functions, but that the iodide reaction appeared earlier if no pepper was given. Owing to the laxative effects of pepper, as demonstrated by these experiments, it is probable that it exerts a favorable influence upon intestinal digestion.—*Correspondenz-Blatt. f. Schweitzer Aerzte*, No. 3. 1891.

SIPHON DRAINAGE IN TUBERCULOUS EMPYEMA.

A paper and an illustrative case on the subject of rapid and successful healing of tuberculous empyema were brought forward by Dr. A. Fraenkel at the recent sitting of the Verein für Innere Medicin (*Deutsche med. Wochenschrift*, No. 17, 1891). The patient, a young man, aged 23, suffered from phthisis of the right apex, with slight signs at the left also. Effusion ensued in the right pleura, the fluid being somewhat blood-stained, and containing tubercle bacilli. No bacilli could at that time be found in the sputum. The pleuritic fluid became purulent, and was removed by Bülau's method (a long india rubber drainage tube passed through the cannula, after withdrawal of the trocar, the tube being made to act as a siphon, discharging into a vessel filled with antiseptic fluid). After subsidence of the fever, injections of Koch's tuberculin were begun and were well borne. In twenty days the secretion from the pleura ceased, and a few days later, after withdrawal of the tube, the wound was completely healed. The patient gained two stone in weight, and is at present doing well, although tubercle bacilli are now present in the sputum. Comparing the results of this case, and others similar to it, with such experience as that lately published by Professor König (see *Supplement*, March 21st, 1891), Dr. Fraenkel expresses astonishment at the strong evidence in favor of the siphon treatment. He believes that tuberculous empyema will soon come to be regarded from a new standpoint, and that the good results which have recently been obtained by operative treatment in the case of tuberculous peritonitis may, perhaps, be obtained in the similar affection of the pleura when the disease in the lung is not too far advanced. He commends the siphon method in all such cases except where the pus is offensive, and for these he regards free evacuation through a wide opening as the most satisfactory treatment.—*Brit. Med. Jour.*

SURGERY.

MESENTERY CYSTS.

Gazette Hebdomadaire of May 31st, 1891, reports the removal of many cysts of the mesentery by M. Terrillon. It is generally very difficult to differentiate between these and cysts of the pancreas; but patients having cysts of the mesentery do not generally suffer from renal disturbance; they are not emaciated, as those who have cysts of the pancreas. Having divided the epiploon, he emptied the cyst by puncture and aspiration, and then tried to remove the tumor, but without success. He has always found it necessary to fasten by suture the sides of the cyst to the abdominal walls and to have recourse to drainage in order to effect a cure.

Three cysts removed by Dr. Terrillon contained a lemon-colored fluid and their cavities were without epithelium.

More frequently the liquid found in cysts of the mesentery is of an undefined color, opalescent, and contains fat, but sometimes the liquid is yellow.

Jules Bœckel, in a work which he has recently published on cysts of the pancreas, gives, as a differential sign between them and those of the mesentery, the almost constant presence of an opaline, viscid liquid containing much fat.

The liquid in the cysts operated on by M. Terrillon seemed to be entirely serous. In these cases the large intestine was found to lie over the cyst so that direct puncture was contraindicated. M. Terrillon did not puncture until he had opened the abdomen in the median line.

These cysts are almost always extensively adherent to the surrounding parts, and, as a general rule, as in cysts of the pancreas, it is not possible to extirpate them entirely. After having opened them and fixed the sack with suture to the abdominal walls, it is necessary to await the gradual absorption of the abdominal cyst.—*Sanitarian.*

SURGICAL TREATMENT OF TYPHLITIS.

Dr. M. Kœrte, in an abstract in the *Medical Age*, says that surgical intervention is indicated in cases of peri-typhlitis. When we have an acute, diffuse peritonitis consecutive to a perforation. In cases of acute peritoneal abscess. When there is a retro-peritoneal abscess. In case of relapsing suppurative peri-typhlitis.

1. Mikuliez was the first to show that the

intervention of the surgeon may sometimes save patients affected with diffuse suppurative peritonitis consecutive to a perforation. I have three times operated on cases of this sort. One of the patients on whom I operated *in extremis*, succumbed. The autopsy showed a cure might have been obtained if there had not been a third abscess which could not be evacuated, seated between the stomach and diaphragm; this was the direct cause of death. Of the two other patients, one recovered with only a superficial wound remaining; the second, a young man of 18 years, is in the process of recovery.

In operating, I advise not to make antiseptic lavage of the abdominal cavity; it is better to mop out the abscess with dry tampons. I do not take a great deal of pains to find the appendix vermiformis to excise it, for it will not do greatly to prolong the operation, the patient being always very much exhausted; but if the appendix can be readily found, it is well to cut it off, after having ligated it at the base with catgut.

2. Encapsulated abscesses should be incised as soon as possible, if we would not have life compromised by perforation; there is always danger of fatal pyæmia, as happened to three of my patients who did not have surgical treatment. It is the rise of temperature on which we depend for knowledge as to whether the peri-typhlitic effusion be prevalent or not. We can have recourse to exploratory puncture with a hypodermatic needle to ascertain if we have to do with pus. I have operated on five abscesses of this kind. Four of the patients rapidly got well; the fifth has still a stercoral fistula; perhaps we have to do in this case with a tuberculous disease. I do not in operating adopt the method of two stages advised by Sonnenburg.

3. The perforation of paratyphlo-enteric abscesses is a relatively rare event, but these abscesses often occasion a phlegmon; the pus penetrates to the sub-diaphragmatic space, and may pass from thence, by perforation of the diaphragm, into the pleural cavity.

I have operated on five cases of this sort; and all got well. Many authorities say we ought to make an early diagnosis of these abscesses; the exploratory puncture with the Pravaz syringe will much facilitate diagnosis.

4. The well-known symptoms of perityphlitic relapse are often explained by the retention of pus, and this of itself gives a reason why surgical intervention is desirable. I have operated twice in cases of this kind. In one of the patients, the appendix was twisted around the colon and adhered firmly to it; it was full of pus. I carefully detached the appendix, tied, and cut it off, then sewed the stump into the wall of the colon. The sequelæ were very simple, and recovery rapidly ensued. In the second case after making a herniotomy I found the appendix in the hernial sac, and excised it after ligation. Eight days afterward the patient was well. The appendix contained fœtid pus.

There is no doubt as to the necessity of operating in these cases. I do not advise following the practice of certain American physicians, who resort to the operation as a prophylactic during the first twenty-four hours after making the diagnosis of appendicitis; in fact, the great majority of cases of perityphlitis get well by internal treatment.

GYNÆCOLOGY.

THE PEDICLE IN EXTRAPERITONEAL HYSTERECTOMY.

M. Doléris (*Revue Obstêt. et Gynêc.*, May, 1891) prefers the extraperitoneal operation in cases of fibroid tumors of the uterus. The chief objection to this procedure is the presence of a wide stump in the lower angle of the wound, which involves painful traction, free suppuration, and prolonged sloughing. He therefore modifies the operation in order to neutralize these evil results. The pedicle is trimmed away inside until it is reduced to a mere membranous collar, which can descend behind the wound just enough to avoid severe traction. This collar is then cauterized with a red hot iron till it becomes like a thick piece of parchment. Its edges are then united by silk sutures, like the stopper of a champagne bottle. Reduced to the size and hardness of a small chestnut, it cannot tear itself away from the pins. At the end of a week or ten days the pins are withdrawn and the pedicle is allowed to retract after its sutured extremity has been trimmed away. On the twelfth day the elastic ligature deep in the wound is cut away; this is not difficult if a thread of silk has been fixed to it, to allow of its being drawn up. Lastly, the sloughy fragments are left to come away; they are never abundant. Two or three deep sutures may be passed through the lower angle of the wound, leaving a small gap for drainage. Granulation proceeds with rapidity, and is complete within a month. From the tenth day the wound no longer appears as though extraperitoneal ovariotomy had been per-

formed, but looks more like the abdominal incision after ovariotomy, with a small opening at the inferior angle. As the cauterized stump is very dry, but a small amount of antiseptic powder need be used. M. Doléris has operated on nine cases after this manner, with good results.—*Brit. Med. Jour.*

OPERATION FOR VESICO-CERVICAL FISTULA THROUGH THE BLADDER.

In order to operate successfully upon a vesical fistula it is absolutely necessary to have a clear view of the field of operation. This is often extremely difficult in cases of vesico-uterine and vesico-cervical fistula, and in those cases of vesico-vaginal fistula in which there are cicatricial adhesions which prevent their being drawn down. Trendelenburg proposed a method of operating (*Volkmann' schen Sammlung klinischer Vortrage,* No. 355) which overcomes this difficulty, namely, performing a suprapubic operation, opening the bladder to freshen the edges, and to sew up the fistula, and then to close the bladder again, leaving an opening for drainage; the opening in the abdomen to be sewed up in part, and the prevesical space to be tamponed with iodoform gauze. Trendelenburg reports three cases operated upon in this manner. The first two were unsuccessful, and colpokleisis had to be performed later on. The third case made an excellent recovery.

Baum (*Arch. Gynakologie*) reports a case of vesico-cervical fistula in which he operated first per varginam, the fistula only healing in part. He then determined to operate according to the Tendelenburg method. The operation was only partly successful, as he was compelled to operate per vaginam again, and even then a fistulous opening remained in the abdominal wound. He then discusses the method, laying special emphasis on the following points: The technique of the operation is a simple one. It is absolutely necessary for the pelvis to be elevated, for only in this way it is possible to obtain a clear view of the field of operation. This is also facilitated if the bladder is pushed up from the vaginal side. The peritoneum is not injured, as the position of the patient causes it to fall up toward the diaphragm. In the care operated upon it lay three to four finger's breadth above the symphysis pubis. The amount of hæmorrhage is slight. It is essential to tie the sutures on the vaginal side, this being done by using two needles, one on each end of the thread, and passing them downward and allowing an assistant to tie them. This is not always easy, but it would scarcely be safe to have the knots in the bladder, lest it might produce a tendency to the formation of stone. It is advisable to use silkworm gut or wire in preference to silk or catgut, as the latter absorb the urine and thus may cause decomposition. A disadvantage in the operation consists in the fact that after its performance it becomes necessary to change the patient's position from one side to the other many times during the first day. This is quite painful. The knees have to be kept drawn up to relax the recti muscles. The urine must not become alkaline after the operation. If it does it becomes necessary to give acids to overcome this tendency.

OBSTETRICS.

THE KYPHOTIC PELVIS.

Among rather primitive people, like those of Hungary, in whom pelvic deformities are not so common as they are, for instance, among the Italians and the Austrians, there is some excuse for ignorance of pelvimetry; for the general practitioner, especially in the country, may not in many years be called upon to estimate the size of a pelvic canal. As civilization becomes more complex, however, developmental anomalies are more frequently seen.

This country, in its astonishing growth and development, has ceased to be an agricultural community, in which the people are well fed and well formed. The urban population has grown at the expense of the rural, and vast numbers of people live and work in conditions incompatible with normal physical growth and well-being. One result of this change in our civilization is seen in the increasing number of deformed pelves among child-bearing women, until at present the proportion of contracted pelves, in the Eastern cities at least, is almost as large as it is in Germany or England. It has become essential, therefore, that even the general practitioner should know the possibilities and limitations of pelvimetry before assuming the responsibilities of the obstetrician. In those parts of the world where pelvimetry is best understood and most assiduously practised, it is recognized that the exact measurement of a given pelvis is often difficult, especially if there is lateral or oblique contraction. The antero-posterior diameter, fortunately, is easily estimated with a won-

derful degree of accuracy if one takes into account the height of the symphysis and its angle with the conjugate. It is this measurement which is most frequently required, for the flat pelvis of various kinds constitutes the overwhelming majority of deformities which complicate labor. A practitioner of much experience, however, will surely encounter at some time a kyphotic pelvis with lateral contraction, if not oblique deformity as well. In such a case it is necessary, before labor, to estimate the degree of resistance which the fœtus will encounter during its expulsion. This is not always easy. Any one with a slight knowledge of pelvimetry can take the distance between the tuberosities of the ischia and so learn the transverse diameter of the outlet, which is usually the seat of greatest contraction; but this measurement does not always tell the whole story.

If there is scoliosis as well as kyphosis, the diameters of the inlet may be diminished more than appears by external measurements, and to a greater extent than can easily be estimated by an internal examination. There is also a possibility of exaggerated compensatory lordosis in the lumbar vertebræ, which may be a more serious obstruction to labor than the pelvic deformity itself. We have seen a case, for example, in which this condition necessitated Cæsarean section. The fœtal spine was bent at a right angle, from the fact that the projecting spine of the mother was firmly wedged in the child's abdomen, between the thorax and pelvis. It should be remembered, on the other hand, that, as a rule, labor in a kyphotic pelvis, if the deformity is not excessive, is easier than one would expect from the appearance of the woman and the size of the pelvis.

At the worst it is usually a simple matter, without much danger to the mother, to do craniotomy at the inferior strait. The late Dr. Taylor, of New York, delivered successfully in this way a woman whose transverse diameter at the outlet was less than two inches. If, however, there is marked scoliosis with oblique deformity of the inlet—if the whole pelvic canal is much narrowed laterally; if the outlet is so contracted that a living child cannot pass—it would be better, in view of the improved prognosis of the operation, to do a Sänger-Cæsarean section, if the consent of the family and patient can be secured. Unfortunately, the indication in these cases is usually relative and not absolute, so that the physician is bound to offer the choice between craniotomy and Cæsarean section, and, alas for human nature, the husband and wife will almost always demand the former if the case is put to them truthfully.—*Univ. Med. Mag.*

PÆDIATRICS.

CHEMICAL STUDY OF THE ETIOLOGY OF SUMMER DIARRHŒA IN CHILDREN.

The investigations of Vargas (*Anales de Obst., Gin., y Ped.*) are in accord with those which have been made by Booker and Escherich. He deduces the following conclusions, which condense the most acceptable and modern doctrine upon this intricate problem of the etiology of gastro-intestinal disorders in children.

1. In the intestines of children who suffer with summer diarrhœa numerous microbes have been found. There are three species of them which are capable of producing chemical poisons, which, when injected into animals, cause gastro-intestinal disorders identical with those experienced by children with summer diarrhœa.

2. The greater number of these germs are probably saprophytic. A microbe which lives in the intestine does not necessarily obtain its nourishment from living tissue. The alimentary substances in the duodenum before being absorbed have no more vitality than the fluids in culture-tubes. The same is true of the juices secreted by the intestine. A microbe which lives in a culture-fluid and develops a poison will also grow in the intestine and develop the same poison if it is not destroyed by the secretions of the body.

3. The only digestive secretion which has been demonstrated to be endowed with a germicide action is the gastric juice. There is no doubt that the acid gastric juice has a germicide action upon many micro-organisms. The author has demonstrated that a two-tenths-per-cent. solution of hydrochloric acid will destroy Eberth's bacillus in half an hour, and two other bacilli obtained from drinking water which were believed to have caused certain cases of typhoid fever. The principal reason why a child nourished at the breast stands a better chance of living than one who is fed from a bottle is that the first receives nourishment which is quite free from germs. In order to acidulate cow's milk the addition of hydrochloric acid is necessary. The gastric juice is the physiological safe-guard against microbic infection of the intestines. If one may speculate upon this matter, it is deemed credible that some of the secretions which are poured into the

intestines have germicidal properties, or that the cells, having absorbed poisonous albuminates, neutralize their effect in some unknown way, or that the liver, when in a state of functional activity, prevents these toxic elements from entering the circulation until they have undergone some kind of transformation.

4. Every germ which is capable of producing and developing an absorbable poison in the intestine is pathogenic. In order to demonstrate the pathogenic character of a microbe it is not sufficient that it be capable of causing disease and death when injected under the skin and into the blood, for the blood is a medium which is entirely distinct from the intestinal secretion in its action upon microbes, and it has been positively demonstrated that the blood holds germicidal properties.

5. The three microbes which have been described by the author differ enough from each other to be regarded as distinct species, and produce distinct poisons. Each of them will cause vomiting and diarrhœa, and will produce a fatal result if used in sufficient quantity.—*Archives Pœdiatrics.*

HYGIENE.

LEPRA AT HANOI (TONQUIN).

Boinet (*Revue de Médecine, Medical Chronicle,* 1890) finds that the disease exists along the watercourses, and that mud is a probable carrier of infection to the naked feet of the poor, the earth being impregnated by the sputa, crusts, and discharges from the lepers. The soil of the cemetery of Hanoi was found to be highly charged with the bacilli, the mode of burial being extremely careless. Native physicians scarcely acknowledge heredity. In the eighty cases examined, absence of heredity was found in sixty-one. The chiefs of the villages, forty years resident, deny having seen any case directly transmitted; nor are they themselves afflicted. Healthy young girls marry lepers and fail to contract the disease. A case is given in which grandfather and grandmother are lepers, while the father and five children, who have constantly lived in the community, have escaped. The eighty cases establish the *possibility* of direct contagion in fifty-one. Children of lepers removed soon after birth to an unaffected district remain free from the disease, while their brothers and sisters living in the leper community contract it. Such children, returning in adult life to the community from which they sprang presently develop symptoms. The theory of the infection by means of the mosquito is regarded as being by no means impossible. The bacillus can find entrance into the mosquito, and has been found in human blood.—*Amer. Jour. Med. Sci.*

THE ADULTERATION OF ALCOHOLIC BEVERAGES.

The Third Biennial Report of the Dairy Commissioners of Minnesota contains the following remarks, which are of importance to physicians: That there are extensive adulterations and sophistications of wines practised in the United States, no one will question. It must not be assumed, however, that all wines upon the American market are necessarily of this character, since there is not a particle of evidence to support such a claim. There are sections of this country that produce wines of excellent quality, and there is no evidence on record to show that these native wines are adulterated or sophisticated during their manufacture or before their sale. Chemical analysis of samples of California wines show them to agree closely to the accepted standards, and give no evidence of being other than pure and of good quality.

In the examination of beers, it was found that the principal sophistication consisted in the use of cheaper substitute for malt, either in the form of other grain: unmalted barley mixed with the malt, rice flour or glucose. The principal effect of these is the production of a beer which is poorer in albuminoids and phosphates, and is, consequently, less nutritious than it should be.

As substitutes for hop bitters, the report mentions picrotoxin and picric acid, but regards their use as rare.

Of preservatives, salicylic acid seemed to be the most popular, as nearly one-fourth of the samples examined contained it. No case of direct adulteration was discovered, all variations from the normal article being some fault of curing or clearing, and the above-mentioned substitutes in the manufacture.

The report deals harshly with foreign brandy. Most of the brandy imported to this country from France is of inferior quality, frequently by reason of absolute sophistication. The term "brandy" seems to be no longer applied to a spirit produced by fermentation of grapes, but to a complex mixture of alcohol derived from grain,

potato or beet-root refuse. Potato and beet-root spirit is shipped into France from Germany and the United States. These are the most objectionable of all spirits, and hence brandy made from them is objectionable. They are flavored and colored, branded and labeled, and shipped to America in large quantities. Physicians frequently order brandy, while when they do so they can confidently expect that one of these mixtures will be supplied to the patient.

The report calls attention to the fact, further, that not one of the samples examined by the Dairy Commissioners of New Jersey in 1888 came up to the pharmacopœial standard. Most of the native brandies are genuine, although they have not been aged enough to make them bland and palatable, and many of them contain fusel oil.

The most of the samples of whiskey examined were deficient in alcoholic strength, and contained too much solid matter in the form of burnt sugar, glycerine, etc. Two out of fifteen samples examined were not whiskey, but artificial mixtures. Those that were genuine were not properly mellowed by age, and were, therefore, harsh, irritating, and consequently disturb the digestion of drinkers, and make them unfit for medicinal use.

MEDICAL CHEMISTRY.

PERMANGANATE OF POTASSIUM AS A URINARY TEST.

At the meeting of the Hunterian Society, held February 25, 1891, Mr. F. R. Humphries read a paper on the reduction of permanganate of potassium by the urine, in which he stated (*British Medical Journal*, March 14, 1891) that, after testing the known organic and inorganic constituents normally present, he came to the conclusion that a phenol was the only one which could produce this effect. The phenol might be present in such form as to admit of ready oxidation. Baumann had proved that phenol, besides being made in the intestine, was also formed during the decomposition of albumen. The reducing body corresponded in its diurnal variations with urea and the uncombined sulphates; it was, therefore, certain that it was, like them, a product of the metabolism of the tissues. If the reducing body was a phenol compound, it ought, when retained, to produce cerebral and nerve effects. It was remarkable that the forms, degrees, and symptoms of carbolic acid poisoning bore the very closest resemblance to those of uræmia, and that several of the most useful drugs in the latter condition were antidotes in the former. It was found that when the excretion of the reducing body was much diminished or increased, symptoms of uræmia were generally present. One cubic centimetre of a five per cent. solution of permanganate was diluted with 4 or 5 parts of water in a test-tube, and the urine rapidly run in from a pipette marked in cubic centimetres. The normal amount of the reducing body excreted in the twenty-four hours was found to be from seventeen to thirty-four grains, reckoned as permanganate, being highest in the first urine of the morning, in that passed four or five hours after a meal, and in fine warm weather. It was much increased in all febrile cases, except when marked cerebral symptoms were present; much diminished during a sick headache, but increased rapidly as it passed off. The author claimed to have discovered the presence of a powerful reducing body in the urine, whose daily history showed it to be a product of the metabolism of the tissues, whose reactions corresponded to a certain extent with those of a phenol, and whose suppression or excess corresponded closely with febrile cerebral symptoms, and with those of uræmia.

Dr. W. Hunter said the views of Proust and Thudichum on urine pigments were foremost down to 1870; since then Jaffé had opened a new era. The coloring-matter was no longer looked on as an independent body, but as a variety of pigments whose genetic relation to those of the bile and blood was established. Bilirubin was, without doubt, of the same nature as hæmatoidin; the relation was illustrated in old blood extravasations where blood was found in the centre; then an area of hæmatoidin crystals, and outside the green color of biliverdin. The modifications of urobilin found in urine (MacMunn) were almost precisely the same as those found in the bile. Urinary pigments were extremely unstable, and readily passed from one body to another when exposed to the air to a few drops of acid. He viewed, then, with suspicion the results of such heroic methods as the use of phosphomolybdic acid, and relied more on the spectroscope and simple extraction with ether, etc. These methods led to the belief that all the pigment was derived from the blood, and was hence an index of the changes in the body.

Dr. Lewis Jones had found a red body in febrile urine, giving a band at F, the junc-

tion of green and blue; this was urobilin, the uropittin, he supposed, of Dr. Thudichum. The color of normal urine was due to a yellow body, which gave no characteristic spectrum, and was unknown.—*Ther. Gaz.*

NEWS AND MISCELLANY.

DOCTOR AND PREACHER.

Parson and doctor joined in one
Most suitably we find;
The one the suffering body treats,
The other soothes the mind.
The parson shows the way to heaven;
And then, with tender care,
The doctor consummates the work,
And gets the patient there.

—*Medical Age.*

MEDICAL DIPLOMAS CONFERRED AND REFUSED IN 1889–1890 IN FRANCE AND GERMANY.

In the German Empire (45,000,000 inhabitants) the German Universities conferred in 1889 and 1890, 1,125 diplomas of doctors of medicine, distributed as follows: Berlin, 163; Bonn, 110; Breslau, 42; Erlangen, 69; Frebourg, 44; Giessen, 12; Goettingen, 25; Griefswald, 80; Halle, 36; Heidelburg, 22; Jena, 42; Kiel, 48; Kœnigsburg, 26; Leipsig, 2; Marburg, 23; Munich, 114; Rostock 6; Strassburg, 63; Tubingen, 22; Wurtzburg, 166. The number of doctors rejected in 1888–89 was 1,030; in 1887–8, 935; in 1886–87, 847; in 1885–86, 685.

In France (38,000,000 inhabitants not reckoning the colonies) the number of doctors rejected in 1889–90 by the six French faculties was 597, a decrease of 28 on the year preceding. Bordeaux rejected 60; Lille, 16; Lyons, 63; Montpellier, 46; Nancy, 26; Paris, 386.

FROM THE DIARY OF A NURSLING.

A Dr. Guster gave a German newspaper the brief but pathetic journal of a baby who. after thirteen days in this world, departed, leaving these reflections for our instruction:

First Day—Wonderful, heavenly! At last I am in this beautiful world! who would have thought it, that one could breathe, freely breathe, and cry out what one thinks? I rejoice particularly in the sunlight and blue sky, in the fresh, pure air with its cool ness. If I could only see and feel all this splendor!

Second Day—O, this horrible heat! I have been deceived. This air, this water, this light; how entirely different have I imagined it would be. But patience, all will come right by and by. The old woman who cares for me does not seem to understand me.

Fifth Day—Still no solution! If it goes on this way I cannot hold out long. The whole livelong day must I lie buried in feather cushions so that I can scarcely gasp down a bit of air. Two linen and one flannel binders, a little shirt, a flannel slip, a long cushion filled with feathers in which I am wrapped from head to foot, over this a coverlet filled with feathers, the curtains of my crib drawn to, the room darkened with double curtains, the windows closed, so must I, poor worm lie from morning till evening. My burning skin is worse off than the hot stove near me, which can at least, as I feel, give off its heat. O, that I did know what I shall do! If I cry it brings the old woman with her milk, which increases my misery; if my hands are cold while my brain and skin are burning she brings a few more wraps. I turn my half closed eyes from side to side seeking help, and my tormentor says "the baby shivers," and really heats the horrible things at the stove. Will no one come to my relief?

Tenth Day.—Again a fearful night! I cry but I am not understood. I must drink, drink, and again drink, until the stomach overflows. A half hour later they give me something with a horrible taste from a teaspoon. Air, air, pure, cool air, light, water! Shall I then have no help from this world?

Twelfth Day.—Yesterday there was a great council of my aunts and cousins. Each one advised a different remedy for my sickness, but all agreed that its cause is a cold. Warmth was urgently recommended, and I received a new kind of infant food just discovered, and some strengthening wine which heated my brain yet a little more, so that I was deathly still. My body is wrapped so tightly with the roller that my stomach overflows every time a teaspoonful of anything is given. My feet are forcibly extended and enveloped, so I cannot bring them up to relieve the pain, but my feeling is gradually going. Would that all were soon over.

Thirteenth Day.—Farewell thou beautiful world! Thy light and thine air have been denied me, but thither, where I go, there are no fetters.—*Schweiz Blätter für Gesundheit spflege.—Sanitary Inspector.*

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Clinical Lecture.

THE NATURE AND TREATMENT OF ORGANIC STRICTURE OF THE URETHRA IN THE MALE.*

BY JOHN H. BRINTON, M. D.,

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Continuing my remarks from the first lecture, let us suppose that you have been called to treat a stricture near the bulbo-membranous urethra, the result of an old gonorrhœa, in a man who is still able to be about. His symptoms have in time, become troublesome, and he wishes to be cured. You have already, by examination on a previous day, demonstrated the existence and locality of a tight stricture. The patient has had a full night's rest, has remained in bed the morning of operation, his bowels have been fully moved by a laxative and injection, and he has taken five or six grains of quinine and half an ounce of whiskey, an hour before your arrival.

In very many cases I operate without anæsthesia, using instead, ordinarily, an injection of half a drachm of a two per cent. solution of cocaine, thrown into the urethra fifteen minutes before I begin. If the stricture be irritable, or the patient nervous, I employ a stronger solution, or, preferably, etherize the patient.

We will suppose an operation without ether. Let the patient be placed on a narrow table—a bed is too low and inconvenient—and let each leg be wrapped separately in a blanket, let the shoulders be slightly elevated, and let him be directed to keep his mouth open during the manipulation, so as to prevent abdominal straining and tension.

If you are not using ether, watch your patient's face and encourage and quiet him. By all means, be gentle with him, and try thus to win his confidence. Above all things, have confidence in yourself; work with the idea that you will pass that stricture, if not to-day, yet in a day or two—sooner or later—and that your success is only a question of time; believing this, your success will be certain.

To begin, with a small syringe, throw into the urethra half a fluid drachm of carbolized olive oil, then, with one hand grasping the penis behind the head, pass a filiform along the inferior floor of the urethra until it is arrested, as it most probably will be at the point of stricture. Then rotate it slightly, and if the point advances, well and good; if not, stop with this whalebone, and do not push it. Take another and repeat the process; if this fails, another, and so on until five or six are *in situ*. Then take each one in turn, and rotate it slightly between thumb and finger; use no force, but let every motion be gentle, the more so the better the chance of immediate success. Remember that there must be an opening through the stricture—it may be small and out of the centre, but tact will surely find it; force or impatience, never.

Perhaps you may not at first succeed with your filiforms. If so, desist for a moment, leaving them in place; then begin again, essaying each one in turn, and the chances are that, at last, one will find the opening, traverse the stricture, and enter the bladder. When it does pass the stricture you will be surprised to find how easily it travels, and you will then recognize that the hindrance was not the tightness of the stricture or its tortuosity or crookedness, but simply a difficulty in finding and entering its mouth or opening. This once accomplished, its passage is the affair of a second.

Occasionally it happens, even after fair efforts, that the stricture opening is not de-

*Second Lecture.—The first Lecture was published in the preceding number of the Reporter.

tected. I then withdraw two or three filiforms from the urethra, and reinsert them, working from the *opposite side* of the patient. Sometimes I take all out, and begin anew from the changed side, and often, very often, I have found that a whalebone carried down under these new conditions will pass without check into the bladder. The explanation of this probably is, that the hand instinctively works towards itself, and so directs the filiforms. Thus it happens that if the stricture opening be excentric, or towards the opposite side of the urethra, the filiform end may travel away from rather than towards the opening sought. Should you fail in your first attempt, it may be necessary to have more than one sitting (to use an artist's expression), and it is better to repeat than to prolong the effort. As to their duration and continuance, you must use your judgment and common sense. If the patient becomes tired or irritated, and especially if there is steady slight bleeding, I advise you to stop for a time. You are probably doing mischief with the whalebone points, using, perhaps unconsciously, a harmful force. The clots of blood, too, form sticky masses, which mask the passage.

By these manipulations—carefully, gently, patiently repeated—you will, I am sure, in the course of one or two trials, pass the stricture, and the first and often the hardest part of the operation is accomplished. The rest is a matter of adroitness and good judgment, and, in the exercise of the latter, it is often well, when the stricture is very tight, to defer the dilatation twenty-four or forty-eight hours, in the mean-while *leaving the whalebone* in the urethra. It can easily be retained, by tying it to the pubic hair. In allowing it to remain in the urethra, it is well, however, to withdraw the extremity from the bladder, so as to avoid irritating the sensitive vesical neck. The filiform thus left produces a degree of continuous dilatation of the stricture and facilitates the more ready introduction of the metallic dilators. For distension of the stricture, I advise the consecutive use first of Sir Henry Thompson's dilator, and next that of the late Professor S. W. Gross. The circumference of the point of the former is seven, and of its thickest part eleven millimeters. By screwing apart its blades, the urethra can readily be dilated to twenty-one or twenty-two, a calibre large enough to permit the introduction of the powerful Gross dilator. This latter instrument with a point of 14, and a shank of 17 or 18, is very efficient, and if properly used, safe.

To return to our procedure; we will suppose that the filiform has passed the stricture, and that its point is in the bladder. It is the guide for the Thompson dilator, and you may think that the latter can readily be pushed over the former, and through the stricture. This is only in part true, and it is just here that mistakes are often made, which have resulted in the failure of the surgeon, and have brought the whole procedure into disfavor. To avoid accidents, proceed in this way: Thread the filiform end through the tunnel of Thompson's dilator, and carefully carry the point of the latter down to the stricture, not by forcibly thrusting the dilator, but rather by drawing upon the whalebone, and gently sliding the metallic instrument downwards and onwards. When the stricture is reached, which will be at once recognized by its resistance, cease absolutely to push or slide the dilator, on the filiform through the stricture. If you persist in the previous sliding motion, you will run the risk of cutting the whalebone, with the perforated end of the instrumen, especially if the opening of the stricture be excentric, and the whalebone be consequently bent at an angle. To avoid this not infrequent accident, when the end of the dilator has reached the stricture, desist entirely from attempting to push or slide it along the whalebone, but slightly withdrawing the latter, grasp both it and the dilator, so that their lengths shall be closely applied, and move them forward by the same motion of the hand. You will find that guided by the lower extremity of the filiform, the dilator will readily advance and as its handle is lowered, its beak will enter the bladder. The presence of the instrument in the bladder will be made manifest by its freedom of motion, and the escape of urine by its side and through its channel, if the stylet be withdrawn. Now slowly turn the screw of the dilator, and separate the blades, alternately increasing and lessening the screw power, until a dilatation equal to 23 or 24 of the French scale is reached. Then lessening the tension three or four millimetres, slowly withdraw the blades and the whalebone from the urethra and meatus. There will generally be some bleeding, slight, and of no importance.

The Thompson instrument having been removed, next introduce the Gross dilator, which will readily pass through the now dilated urethra, and as before, separate the blades and over-distend the stricture. I generally push this dilatation up to 30 or 35, according to the resistance of the stricture, and the thickness of the penis. The greater

the diameter of the latter, as shown by Otis, the larger is the normal urethra; thus a penis three-and-a-half inches in circumference possesses usually a urethra 28 to 30 calibre. In withdrawing the instrument, reverse the screw and bring the blades to a calibre of 26 or 30, and avoid enlarging the meatus unless it has been morbidly contracted. It is well, then, to pass a series of Thompson's sounds, 26 to 30, in order to be certain that the stricture is well dilated, and that easy instrumentation is feasible. Then draw off the urine and tie a soft catheter of 24 or 25 calibre in the urethra to prevent the contact of the urine with the urethral walls. After the operation, the patient should be well wrapped up, and a hypodermic of one-sixth of a grain of morphia given, to be repeated if necessary. Severe symptoms rarely follow, if the after insertion of the soft catheter be made to prevent urethral fever and the septic effect of urine contact. On the third or fourth day, I remove the soft catheter and pass 26, 27 or 28 Thompson's sound, which is generally painless if gently done. The use of the sound is continued every other day, and by the expiration of eight or ten days, the patient is usually dismissed from treatment, having been first instructed and practised in the use of the sound, and furnished with 25, 26 and 27 for self-introduction.

The diet of the patient in the early days after operation should be from one-and-a-half to three quarts of milk, with a free use of lemonade for the thirst. This contraction seems incongruous, but it is satisfactory, sufficient and grateful to the patient.

Such, gentlemen, would be the treatment I prefer for a deep seated, tight, organic, idiopathic urethral stricture, when the circumstances of the case admit the time required for the procedure.

Again, urethral stricture, as you know, often gives rise to retention of urine, more or less prolonged, a condition demanding immediate relief. It is not then a question of dilating or curing the stricture at that time, but rather of passing a catheter into the bladder, drawing off the urine and thus relieving the man from torture. To do this, etherize your patient, pass the whalebone, as above directed, and over this carry into the bladder a small-sized tunneled silver catheter, such as were devised some years ago, by Professor Gouley, of New York. Of late I have somewhat varied this process, and use a whalebone filiform twenty-six inches in length. Over this I pass an ordinary flexible gum catheter, perforated at the point, which can easily be threaded on the whalebone, and passed into the bladder. If it should happen, that the stricture binds so tightly as to prevent its immediate passage, I am content to leave the filiform in position, the point of which has entered the bladder. Experience has repeatedly shown me that the urine will pass along it by capillary attraction, and that in a few hours the bladder will be entirely relieved. By its presence also, continuous dilatation is established, and in twenty-four, or forty-eight hours it becomes loose, however tight was the stricture when first introduced, and thus, the immediate symptoms of irritation and retention having passed, dilating processes may safely be resorted to.

In all cases of urethral instrumentation, even in so simple a matter as passing a sound or catheter in my office, I observe certain precautions: *first*, I always place the patient in the recumbent posture, to prevent faintness, or should that happen, to prevent him from falling and injuring himself; *secondly*, to prevent shock and irritation, I give him at the time a teaspoonful of paregoric; *thirdly*, to allay the burning sensation in the urethra, and to ward off vesical irritation, consequent upon the presence of a foreign body, for an instrument is a foreign body, I direct a cold douche to the head of the penis to be thus applied; let the patient guard his clothes with a napkin, and then retracting the prepuce, play a small stream of water, less than the thickness of a quill on the glans penis behind the corona, especially on its under surface. The effect of this on the terminal branches of the pudic nerves is magical. Urethral soreness, and vesical irritation disappear on the instant, and the patient departs in a condition of physical comfort, and mental satisfaction. Over the water basin in my office, I have a small faucet, and flexible pipe for this purpose, but a fountain syringe or a funnel affixed to the wall, with a small rubber pipe and a quill or catheter nozzle will answer equally as well.

Comparative dangers of urethral operations. No manipulation with the urethra, is entirely free from danger. I have known the insertion of a flexible acorn bougie No. 11 F. though painless at the time, to be followed in an hour by terrible shock, and eventually by an obstinate *epidydimitis*. Many years ago in a middle aged man, I divided at his clamorous request, a stricture of the meatus, which obstructed urination, and had months previously, been cut with

impunity. Sudden collapse, and death took place in seven or eight hours, possibly after urination. The most searching post-mortem examination failed to detect any cause of death. Incision of stricture of the anterior urethra is ordinarily harmless, and yet I have seen violent hæmorrhage follow, and death from septic poisoning. Gradual dilatation of soft and tractable strictures of the same part is usually well borne, but if the stricture be tight, it may prove tedious, and if resilient the result is apt to be temporary and ineffectual. Excessive irritability frequently forbids further dilating and repeated operation and demands incision of the stricture; and when this is done, it often happens that the previous irritability passes away.

As we have seen, the most frequent seat of annoying stricture, is at the bulbo-membranous region; how shall they be dealt with? shall they be cut by internal urethrotomy, or can they be dilated or over distended? I have endeavored to show you, and at all events have expressed my earnest conviction, that all deep non-traumatic strictures are permeable, that they can be traversed by a filiform, and by its guidance, they can be fully dilated and so kept, and that their method is applicable to every stricture, however firm its structure, however small and devious its calibre may be. In many years of private practice, and of public clinical demonstration, I have never met with a failure, nor with a death. Difficult cases I have had, and cases demanding great patience, but all ultimately yielded to the procedure I have described, a result which in great part I attribute to the blessed influences of antiseptic precautions. Under these circumstances I therefore contend that the processes we have studied together are as approximately safe as any urethral manipulations can be.

Now how is it with internal urethrotomy? Many, indeed almost all of the latest workers in genito-urinary diseases, admit a mortality for internal urethrotomy of certainly one or two per cent., and some as high as five per cent., a death rate which I think must be over estimated. But in any event, it appears that internal urethrotomy is a much more dangerous operation than it was at first considered, and this mortality rate is becoming greater as the voices of operators are being heard. As a consequence, there is a growing disposition, even among its ardent partisans to restrict and limit the applicability of the operation. I have myself seen death follow the blades of skilful and renowned urethrotomists, one of whom, and I have it from his own lips, was disposed to greatly limit if not entirely renounce the operation, of which he had been a most ardent advocate, on the very eve of his being sadly taken from us.

One fact in regard to this operation must always be borne in mind, and that is, that internal urethrotomy from behind forward, the most popular and safest form of division, demands a previous dilatation of the stricture, equal to the diameter of the cutting instrument.

It has been asserted and truly, that full dilatation cuts or lacerates a urethral induration, in nearly the same manner as internal urethrotomy, and that this is demonstrated by the endoscope. True, but with this important difference. If the dilatation be gently and slowly done, the stricturing tissues give way first and the traumatism is limited to the bands at fault. With the cutting blade, on the contrary the incision is not self limited; the tissues, diseased and healthy alike, are apt to be largely divided, the bleeding is often considerable, and as the admitted evil consequences show, septic poisoning follows in an appreciable percentage of cases.

Of the operation of *divulsion* introduced some years since by Mr. Holt I need say little. Here are the instruments. By sliding this tube over a central rod, two blades were forcibly separated, and the stricture, instantaneously burst. It was a rude process, mechanically successful, but often, very often followed by disastrous shock, and death. I remember, at one society meeting, the exhibition, in which I took my share, of seven or eight specimens of ruptured urethra, since which time I have refrained from the operation. I believe that it is deservedly a thing of the past.

I have not in these remarks referred to external urethrotomy or perineal section. You have seen me perform it in deep seated traumatic stricture, and in old iodiopathic strictures, attended with fistulæ, burrowing sinuses, and loss of perineal substance. Under these circumstances the external section, has been demanded by the attending complications rather than by the tightness of the stricture. But, of these I shall speak hereafter.

In advocating the dilatation of stricture, I am aware that it is often said that the process is incomplete, and not abreast with the latest procedures. Yet I maintain that with suitable care, this operation when properly performed, will accomplish as great, if not greater results, than the methods of internal

division. The secret of the procedure, is the intelligent use of rightly constructed fine capillary whalebones, which possess qualities not to be found in the gum or soft instruments, however minute. The dilating or distending process, is, I am convinced far more safe than the cutting operation, the death rate of which is steadily augmenting.

I have thus expressed to you my preferences in the treatment of stricture. At the same time I must add that within reasonable limits, every surgeon ought to practice those methods, in which he individually is most skilled, and which therefore presumably offer the best chances to his patient. The Japanese carpenter planes backwards, the American forwards; neither can adopt the method of the other, yet the handicraft of both is good.

The general rules which govern me in the treatment of organic stricture of the urethra, may be thus formularized:

First—Strictures of the meatus, and its immediate neighborhood, should be incised.

Second—Strictures of the pendulous urethra, not markedly annular, not resilient, and not irritable, may be gradually dilated by solid bougies. If annular, resilient, and irritable they should be treated by internal urethrotomy.

Third—Idiopathic strictures of large calibre, at or near the bulbo-membranous junction, should if possible be treated by gradual dilatation.

Fourth—At the same locality, tight strictures of small calibre, will still be found permeable to filiforms, and can be treated by whalebones, and dilators with greater safety than by internal urethrotomy.

Fifth—In traumatic strictures, wherever situated, those which follow violence or surgical cutting, internal or external, the continuity of the urethra is disturbed, and the apertures of its channel often do not correspond. These constitute the true impermeable stricture, and may require external urethrotomy, and perineal section.

Benzin for Boils.—Dr. F. W. Langdon uses benzin as an abortive agent in furunculosis, employing it in the following manner (*Lancet-Clinic*): At the first appearance of the little hard, painful papule, saturate a pledget of absorbent cotton with the remedy, and press it firmly, but not forcibly, over the swelling for about half a minute. Repeat this every hour or two for the first day; after that, two or three times a day, as the swelling and pain subside.

Communications.

COCAINE POISONING.*

BY J. B. MATTISON, M. D.,

MEDICAL DIRECTOR, BROOKLYN HOME FOR HABITUES—MEMBER AMERICAN MEDICAL ASSOCIATION—AMERICAN ASSOCIATION FOR THE CURE OF INEBRIETY, N. Y. ACADEMY OF MEDICINE, MEDICO-LEGAL SOCIETY, N. Y. NEUROLOGICAL SOCIETY, MEDICAL SOCIETY OF THE COUNTY OF KINGS.

At a meeting of the New York Neurological Society, November 5, 1886, Dr. Wm. A. Hammond, speaking of cocaine said, "He did not believe any dose that could be taken was dangerous."

In a paper by the writer, read before the Kings County Medical Society, February 13, 1887, on "Cocaine Dosage and Cocaine Addiction"—published in the *Lancet*, London, May 23, 1887—four deaths from single or repeated doses, and 46 less toxic cases were cited; and in a second paper, on "Cocaine Toxæmia", read before the American Association for the Cure of Inebriety, November 8, 1887—published in *La Tribune Medicale*, Paris, January 1, 1888—3 more deaths and 73 less lethal cases were noted—more than 125 in all—making the most extensive resumé, to that date, and impelling an editorial assertion from the *British Medical Journal*, that "if it were needful to produce more proof of the unsoundness of Dr. Hammond's statement, Dr. Mattison has effectually done this."

In discussing a paper on "Cocainism", read by myself before the D. C. Medical Society in Washington, December 24, 1890, Dr. Hammond confessed that he was *wrong* in his original statement, and said *he* had noted nearly fatal results from cocaine.

This paper will add proof upon proof as to its poisonous power, by citing more fatal, several nearly so, and many less toxic cases; it will place a proper estimate on the lethal strength of this—in some respects—peerless drug; and it will make pertinent the preamble and resolutions presented this Society.

In an extensive brochure, brought out last year, by Dumont of Berne, reference is made to the more than six score cases cited in my papers, and others are noted.

*Read before the N. Y. Medico-Legal Society, March 11, 1891.

We shall first detail the fatal cases instanced from June 1888, to March 1891, and then those less toxic.

Simes—Male, age 29, one drachm of a 20 per cent. solution injected in urethra, prior to urethrotomy. Instrument was scarcely removed, when patient made a foolish remark, facial muscles twitched, eyes staring, frothed at mouth, and face was congested, breathing embarrassed and a violent epileptiform convulsion, lasting several seconds, ensued. This, increasingly severe, continued several times a minute; the whole muscular system was involved, requiring force to keep him on table. Lung action first failed, then the heart irregular and slow, breathing more and more disturbed, face and entire body deeply congested, and twenty minutes from the first convulsion, patient was dead.

Abadie—Three-quarters of a syringe full of a 5 per cent. solution, was injected prior to operation on eye-lid. In ten minutes patient became unconscious, face cyanosed, and respiration ceased. After great effort with hypodermic ether injections, and artificial breathing, there was partial resuscitation, but patient died.

Zambianchi—Female, 4 grains, 225 millegram. injected near mammary cancer, as local anæsthetic; immediately epileptiform convulsions ensued, lasting fifteen minutes; transient rally under artificial respiration, then renewed convulsions, and in 5 minutes, death.

Montalti—Female, phthisical, one lung; 22 grains taken per mouth, by mistake. In 15 minutes, mental wandering, general coldness, increasing delirium, lips cyanotic, pallid and pulseless; became unconscious and "in short time" died.

University College Hospital, London—Male, 20 grains, in solution, intended for bladder injection, swallowed through mistake. Patient's condition not noted for nearly an hour; then found with opisthotonos and limb spasms. Soon after, died.

J. fur Z.—Female, 29 years, healthy, but very nervous, three injections, one-third gr. each, in gum, prior to teeth extraction. Operator withdrew from patient's chair to get water for rinsing mouth, and on return, found her motionless. Artificial respiration employed, but woman died.

Stewart—Male, 32 years, one and one-half drachms of four per cent. solution, injected prior to dilating urethra. Almost at once patient said, "I feel sick", pupils widely dilated, pulse weak and quick, became rigid and unconscious. After one minute partial recovery, but two minutes later fell back on table, rigid, unconscious and began to have violent general convulsions, almost throwing him to floor. Spasms were clonic, commencing in face and extending over whole body; deep cyanosis, quick, weak heart, and partial suspension of breathing; convulsions lasted three minutes, then gradual return to consciousness and able to leave in an hour.

Chetwood—Male, 25 years, one drachm, four per cent. solution injected, before cutting stricture. In three minutes patient nervous and excited, wildly violent, needing several men to restrain him; fought and shouted like a madman; had tetanic spasms, arm, leg and thorax muscles rigid and drawn; stiff-legged walk, would have tumbled without aid; under whiskey and hypodermic morphia, became quiet.

Finlay—Female, six teeth extracted, prior to each, one grain injected in gum. It caused extreme general pallor, coldness and insensibility; pulse 38, weak and intermittent; "heart almost exhausted"; respiration fell to 5 per minute, shallow, irregular and extremely dyspnœac; arm spasms; great pains in back of head and heart. Despite free stimulation, breathing almost ceased, then artificial respiration and external stimulating for forty-five minutes; heart and lung action improved, but spasms continued. Relapse; pulseless and seemingly dead; renewed forced breathing, and hypodermic injection, ether 30 min. in arm; treatment continued three hours; gradual recovery. Patient was five months pregnant; no untoward effect on child.

Golookoff—Female, 15 min. 2 per cent. solution injected. In five minutes, patient restless, pallid, shivering, quick pulse, "respiration soon ran up to 200 per minute" (?), and was labored; heart sounds heard two paces from patient; limb spasms, and great pain in heart and back.

Monat.—Male, 29. 7 min. of a 20 per cent. solution for local anæsthesia. In 3 minutes patient faint, gasping, cold, rigid extremities, face blue and pinched, pulse 120 and weak, speechless, and had repeated clonic spasms.

Booth.—Male. Ten grains injected in urethra, patient became excited and demented for 45 minutes.

Gooding.—Female. One-half grain injected in gum before tooth taking. Immediately wild staring look, very restless, quick gasping breath; in two minutes condition alarming, wildly delirious, tossing arms and legs, extremities cold to elbows and knees, breathing fast and irregular, pulse 120 and weak. Despite ether, ammonia, and brandy

by mouth and ether hypodermically, the collapse became profound, R. 60, P. 150, irregular and almost lost; rallies under continued stimulating, but after 3 hours was still delirious; mental disorder continued 7 hours and ended in sleep.

Neilson.—Male 29. 45 min. of 4 per cent. solution in prepuce as anæsthetic; patient became restless and excited, incoherent talk, pale, profuse sweat, feet cramps, pinched, ashen face, pulse 44 and small, breathing shallow.

Neilson.—Male, 33. 50 min. of 5 per cent. solution injected in scrotum. In one minute eyes fixed, pallid, sweat bath, running pulse and violent vomiting.

Randall.—Male, 6. Pledget, 5 min. of 4 per cent. solution, ½ grain in nose, caused inability to walk, wild delirium, with hallucinations, tremors, unconsciousness. Subsultus and convulsive movements lasting several hours.

Roux.—Female. 2½ centigrammes injected caused opisthotonos.

Roux.—Female. 3½ centigrammes, toxic symptoms, pallor, and cardiac distress.

Roux.—Female. 5½ centigrammes injected in temporal region for headache caused violent tetanoid spasms.

Earle.—Male, 65. Three-quarters of a grain injected as local anæsthetic caused great depression and other toxic symptoms, so that, despite nitro-glycerine injections with amyl inhalations and whiskey, *ad. lib.*, it was nearly an hour before patient was safe.

Wissinger.—Ten min. 15 per cent solution injected, caused pallor, profuse sweating, small, wiry, 140 pulse, respiration 40, great dyspnœa, and spasms of arms and legs.

River.—Male. Six drops 4 per cent. solution in each eye caused nausea, faintness, clammy sweat, and pulse of 40.

Schadle.—Male, 35. Repeated application of 4 per cent. solution on cotton to nostrils caused peculiar feeling about genitalia; cold and sensation as of penis absent; this effect repeated several times; remarkable action on genitalia; "cold and relaxed;" "gone feeling," noted towards end of treatment; this increased to semen loss and impotence, which lasted till cocaine ended, when virile power gradually returned.

Settier.—Male. 25 grammes of 4 per cent. solution in bladder: patient had daily injected for 7 months; this time caused vertigo, nausea, vomiting, "rocky" gait, cold sweat, thready, 103 pulse, indistinct speech, voice thick and shaky. Two relapses, 1½ minutes each, but quite recovered in eight hours.

B. M. J.—One and one-quarter grains injected for sciatica; soon restless and excited; pulse and breathing rapid; choreic movements; symptoms lasted 4 days; even then, patient restless and giddy.

B. M. J.—Boy, 13. 1½ grains injected as local anæsthetic. In 5 minutes patient pale, restless, and dyspnœac; pulse almost uncountable; nausea and epigastric pain. Patient recovered in 4 hours.

Garcin.—One-half drachm of 3 per cent. solution by bowel, caused hurried breathing, quick, weak pulse, and cold extremities. Recovered under stimulants.

Myrtle.—Female, 45. 3 drops of 3 per cent. solution in each eye. Immediate numbness of tongue and throat, faintness, intense palpitation and irregular heart action, extreme nausea and great flatulent distension of stomach and bowels, lasting one hour. Not $\frac{1}{1\frac{1}{1}}$ grain in each eye.

Myrtle.—Eight minims, same solution as nasal injection, caused like, but less severe symptoms.

Stedman.—Twenty min. 5 per cent. solution—1 grain—as local anæsthetic in labial cancer. Soon became excited, pulse 160 and scarcely felt; respiration quick, short, irregular, panting; cold feet and clammy sweat; marked cyanosis. Recovered under hypodermic ether, 20 minims, every 7 minutes, 4 times. Symptoms ended in one and a half hours, except that pulse continued at 112.

Ficano.—Woman, 45. "Few drops" of a 5 per cent. solution in cavity of middle ear. Caused vertigo, nausea, vomiting and cramps, lasting several hours.

Brinton noted a case in which cocaine was injected after applying a tourniquet, but "as soon as it was loosened, the patient gave a gasp, face became livid, he struggled for breath, pulse was feeble and his condition quite alarming for some time."

Mitchell reported 5 cases. Both sexes, age from 20 to 50, in which a 4 to 10 per cent. solution used under skin, by spray and nasal pledget, caused vertigo, heart pain, dyspnœa, quick, weak pulse, syncope, general numbness and tremor, rigid limbs, and in one case complete paralysis, except tongue.

Hœnel.—Female, 19. One and one-half grs. injected in gum, two injections, prior to tooth extraction. Immediately after second injection patient became pallid and fell in convulsions. Nitrite of amyl, useless. Was cyanosed. Unconscious and in severe convulsions 5 hours. After convulsions unconsciousness continued 2 hours, pulse at first uncountable, then 176, resp. 44, axillary temperature 101; mouth, throat and nose

numb; suppression of urine 24 hours; sleepless 40 hours. Symptoms persisted 2 days.

Lobker observed five cases in which severe collapse followed the injection of small doses of a fresh 5 per cent. solution in gums prior to tooth drawing.

Judkin observed two cases with dangerous symptoms.

Buscarlet reported a case with toxic symptoms, after injecting in a hydrocele.

Witzel noted hallucinations of sight, hearing and taste after injection of one-half grain.

Meyer reported a child with headache and difficult speech from injection of two decigrammes.

Schilling.—Male. Age 20. Prior to lithotrity, one grain in bladder caused general rigidity and pulse of 180.

Ricci.—Male. Injected in thigh for sciatica, 22 grains by mistake. Caused restless excitement, facial spasms, choreic movements, quick action of heart and lungs, symptoms persistent 3 days. On 4th day symptoms recurred with increased intensity; patient unable to lie down on account of dyspnœa several nights; vertigo persisted for days.

Manley.—Male. 1½ oz. 4 per cent. solution, 4 grs. nearly, as anæsthetic before amputation; "He reeled over in a faint, became nearly pulseless, cold and deathly pale. After perhaps 20 minutes, reaction set in. * * * I felt earnestly thankful that a life was not lost through our experiment, for I was thoroughly frightened."

Wyeth has seen convulsive movements followed by opisthotonos. In another case decided convulsions after gradual injection of 30 min. of a 4 per cent solution in urethra.

Hallopeau noted a case in which an injection of 8 centi-grammes in the gum caused grave toxic symptoms.

Brush reported two cases of poisonous results.

Bissell.—Male. Age 29. 40 min. of a 6 per cent. solution injected before circumcision: "Serious constitutional symptoms;" nausea, vertigo, blindness and unable to walk for several hours.

Spivak.—Girl. Age 2 years. 1 gr. by suppository. One hour later child became restless, very excited, quick pulse and choreic movements.

Douthwaite.— Female. Accustomed to using injections to relieve sciatica. Took repeated doses, aggregating 16 grains; was found unconscious and in convulsions.

Slayter noted a case in which 15 min. of a 10 per cent. solution injected in toe, caused cyanosis and epileptiform convulsion.

Réclus and Wahl observed, in 4 cases, serious symptoms; pallor, nausea, cold sweats, quick pulse, dyspnœa, vertigo and syncope.

Johnston.—Female. Aged 20. After half gr. injection in toe for anæsthesia in ingrowing nail, patient was cyanotic, pulseless and collapsed.

Moizard.—Child. Aged 4. Given by mistake, four grains, caused extreme nervousness, severe chest cramps, muscular twitching, lasting 31 hours. Hallucinations and convulsions.

Wood cites a case in which 5 grains by mouth caused nausea, great sweating, incoherent speech, blindness, rapid intermittent pulse, cyanosis and suffocation.

Von Ploss.—Male. Would-be-suicide took 22 grains in beer, causing great belly pain, intense dyspnœa and vertigo, and urine suppression for 24 hours.

Cauldwell noted a case where 15 minutes after injection of 5 grains, there was unconsciousness and general convulsions.

In another case, headache, great vertigo, partial blindness, and temperature fell to 96.7.

Ingalls reported alarming symptoms from ½ grain applied to nasal membrane.

De Beck reported two cases, female. 4 per cent. solution to eye, caused clammy sweat, quick weak pulse, with gasping respiration, 6 per minute. Third case. 8 drops of a 5 per cent. solution caused such alarming symptoms, cataract operation had to be abandoned.

Chalmers Da Costa reported to me case of woman, age 22, in whose forehead he injected 10 min. of a 6 per cent. solution, causing shallow, rapid breathing, quick, weak pulse, great tremor, temperature 102, with delirium for several hours, and complete analgesia.

Here are more than 200 recorded cases. What of the unrecorded? Here is evidence too weighty to be rejected. Here is an oft-told lethal tale. What is the moral?

Before reaching conclusions, let us note the views of various observers touching the toxic power of cocaine, with such counsel as they have given to lessen the risk of untoward results that have robbed this peerless drug of much favor in the minds of many surgeons, and so deprived them of a most valued ally.

Réclus and Dumont lay large stress on three points—the quality of the drug, the quantity of the drug, and the site of injection. The former's brochure—brought out last year—is the most extensive yet presented on the action of cocaine as a local

surgical anæsthetic—his experience covering 700 operations. He thinks many ill results, near and remote, due to stale or spurious solutions. Dosage, too, is important; ½ to 2 grains he thinks the maximum, and that not less than 20 centigrammes would poison. In this last opinion he is wrong.

Réclus has a special method of dosing. He quadrangles the operative field, and plunges a long, fine needle in its entire length along each lateral outline. Then—and on this he much depends—as the piston is pushed down the needle is withdrawn, timing the combined movement so that when the needle tip emerges, the syringe is empty. This is done four times, quickly, and, by so doing, he thinks a large area is anæsthetized and the chance of a blood vessel injection brought to a minimum. He also thinks it of "priceless value" in weak heart and renal disorders.

Réclus is clearly an enthusiast on cocaine, and we think, although his experience has been such a happy one, it would be courting a large risk to place full reliance on his assertions. Judging by scores of well attested, he is wrong as to non-toxic effects from less than 12 to 20 centigrammes. His care as to slowness of injecting and gradual withdrawal is commendable.

Dujardin Beaumetz takes issue with him on one point—claiming it extra-hazardous in cardiac weakness; and, just here it may be well to recall a case noted by Knabe of Berlin—cited in my first paper—girl, aged eleven, who was given 4 to 12 drops of a 4 per cent. solution, by injection over the deltoid to remedy frequent fainting fits, she having cardiac debility sequeling scarlatina. In less than 40 seconds she took a deep breath, became deadly pale and dropped unconscious. One minute later she was dead.

As to its effect in renal disease, more than one writer has laid stress on the fact that as it is largely excreted by that organ, a crippled kidney would enhance the toxic risk.

As an opposite extreme to Réclus regarding dosage, Lauderer says, a maximum injection should be 12 to 15 millegrammes!

Dumont thinks a surgical subcutaneous injection should not exceed ⅓ to ⅚ of a grain. Litten, Wölfer, Decker, Hænel, Orloff and Szumann share in this opinion.

Wölfer says injections about the head are more dangerous than on body or limbs, and that more than ⅓ gr. should not be injected. Dumont thinks there is less danger from cocaine in eye, nose and throat diseases.

Koller advises weaker solutions on body than on limbs, and says that nothing stronger than a 5 per cent. solution should be used in the nose; the effects being the same as from a 20 per cent. solution, only more time is needed to secure it.

Wyeth advises against cocaine under 10 or 12 years; and it is worth noting that the smallest fatal dose recorded was in a girl of twelve.

Regarding a danger from impure cocaine I believe this feature as a toxic factor is small. It has a killing power, *per se*, and the purer the product, the more decided this may be. Let no one think the pure drug harmless.

Dumont, Wyeth and J. M. Barton specially advise the use of Esmarch's bandage whenever cocaine is injected in the limbs for local anæsthesia. Barton says that when the operation is ended he loosens the bandage and immediately tightens it. This is repeated several times, every few minutes. In this way a small quantity enters the circulation at a time, and a large amount can be disposed of without harm. He states that prior to using this plan he often found toxic symptoms when bandage was loosened after fifteen minutes, whereas before no ill effects at all were noted. Leonard Corning adopts a similar device.

Of the fatal cases, 4 were by hypodermic injection, 2 by urethra, one each by gums, larynx, stomach, bowels and bladder, 2 unknown.

In 9 cases death followed collapse; 3 convulsions; 1 unknown.

The largest fatal dose, not injected, was 23 grains, by bowel. The next highest, 22 grains, by mouth. The largest non-fatal dose, not injected, was 22 grains, by mouth. The largest non-fatal dose injected was 19 grains, in leg. The smallest fatal dose, hypodermically, was 8 drops of a 4 per cent. solution, in arm.

COCAINE HAS KILLED IN SMALLER DOSE THAN MORPHINE.

Autopsies were held in cases of Simes, Montalti, and University College Hospital. In each there was marked congestion of brain, lungs, liver, and kidneys. Montalti thinks the drug kills by causing vaso-motor paralysis and consequent congestion.

CONCLUSIONS.

1. Cocaine may be toxic.
2. This effect is not rare.

3. There is a lethal dose of cocaine.
4. The lethal dose is uncertain.
5. Dangerous or deadly results may follow doses usually deemed safe.
6. Toxic effects may be sequence of doses large or small, in patients young or old, the feeble or the strong.
7. The danger, near and remote, is greatest when given under the skin.
8. Cardiac or renal weakness increase this risk.
9. Purity of drug will not exempt from ill-result.
10. Caution is needful under all conditions.
11. Réclus' method, Corning's device, or Esmarch's bandage should be used when injecting.
12. Nitrate of amyl, hypodermic morphia, hypodermic ether, alcohol, ammonia, and caffeine should be at command.

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POLYURIA IN EARLY INFANCY. *

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Diabetes insipidus, or Polyuria during the first year of life, has, I think, not been observed before this—certain it is that I have not been able to find the record of a case while scanning the literature pretty carefully. It seems, therefore, quite appropriate to publish the few cases which I have had the opportunity to see. They are four in number, but in two only have I been able to see the patients through to recovery.

I—*Francis M.*, born November 22d, 1888, the first child of his mother, had been healthy during the first months of his life. He had been nursed until about two months old; but the secretion of milk gave out gradually, so that at last he had to be fed artificially entirely. His food consisted alternately of milk and barley-water, Soluble food and Nestle's and the child seemed to thrive well on this diet.

On April 18th, 1889, I was called to see him for an attack of purging and vomiting. I prescribed calomel and bismuth and ordered barley-water only to be given.

I was told the next day that the child seemed to feel better; towards evening of the 19th, he became very restless and this lasted till noon the following day (April 20th.) Slight convulsive twitchings were observed during the forenoon of that day and no urine was passed from 6 A. M. till 12.30 P. M. Some cough had set in and respiration had been growing very rapid. The mother had also noticed that the child looked somewhat puffed up in the face.

On examining the child that afternoon, I found some œdema of the face, hands and feet; his stomach was quite distended, partly tympanitic, partly dull on percussion; he had had no passage for about 18 hours. T. 101½° F., R. 35, P. 120, pretty weak.

On percussion there was some dulness below the left scapula, some rough breathing, almost bronchial in character and a little crepitation was heard on auscultation. On both sides posteriorly rough respiration and numerous râles were heard all over, especially over the lower portion of the chest; the heart did not show anything abnormal.

Taking all the symptoms in consideration I concluded that I had to deal with a congestion of the kidneys. The convulsive attack and the œdemata justified me in attributing the bronchial symptoms to the same cause: beginning uræmia. I ordered a laxative to be given and some urine to be collected and sent to me as soon as possible. It was not until noon of the following day (21st) that the mother succeeded in doing so; the child passed urine only four or five times from 6 A. M. on the 20th to 12 M. on the 21st. The first time at 12.30 P. M. on the 20th, as before stated.

To my great surprise the urine sent to me was as colorless as water; its specific gravity was between 1,000 and 1,001. Of course, it did not contain either albumen or sugar.

Dr. P. Guenster and Dr. J. H. Mennen were kind enough to examine the urine microscopically, the former at the laboratory of the "Post Graduate Medical School," the latter at Dr. Heitzmann's laboratory. Both gentlemen reported that they had found numerous micrococci, epidermal scales and mucous corpuscles, but no other abnormal elements.

Next morning's report was perfectly in accord with this unexpected result. The amount of urine passed by the child had increased considerably. He had to be changed very often and every time all his clothes and sheets were thoroughly soaked. The boy appeared to be unusually thirsty, too; while previously he had been a very

* Read before the Pædiatric Section of the New York Academy of Medicine on May 14, 1891.

good child, he now was very restless and wanted to drink constantly, although there was no fever.

As is well known, the treatment of diabetes insipidus or polyuria is a very unsatisfactory chapter of our therapeutics; a glance at the great number of drugs recommended for it is one of the best proofs of this fact. Külz† mentions more than thirty, of which I shall refer only to those best recommended. These are: belladonna, valerian, ergot, salicyl, phenol, arsenic, antipyrin, and nitric acid. One of the latest agents‡, recommended by Dr. Gaiffe, an assistant of Prof. Dujardin-Beaumetz, is phenacetine. This gentlemen has had encouraging results with it in two cases.

Both were patients having suffered for some length of time from nervous polyuria. Dr. Gaiffe succeeded in reducing the amount of urine passed daily from 6,500 grammes (216 ounces) to 4,225 grammes (140 ounces) in one case, and from 4,000 grammes (133 ounces) to 1,500 grammes (50 ounces) in the other. In the beginning he gave 0.5 grammes (8¼ grains) in 24 hours, a dose which he gradually increased to 2.8 grammes (℥ss). He observed in both cases a partial return of the polyuria as soon as he discontinued the phenacetine. (The latter observation I have not been able to corroborate.)

All the various drugs enumerated above having proved unreliable, I did not hesitate to follow Dr. Gaiffe's recommendation. I prescribed 0.25 grammes (4 grains) of phenacetine, to be given four times a day. I was agreeably surprised to hear that gradually the amount of urine passed by the little one diminished, the polydipsia became very much less marked, and the specific gravity of the urine increased in proportion. On April 26th, it was 1,005; on April 29th, 1,007; on May 1st, 1,008, and on May 4th, 1,012; I discontinued the phenacetine and the child appeared to be well. On May 19th the specific gravity of the child's urine was 1,015.

The boy had regained what he had lost in the meanwhile and looked well; his health remained good up to the end of June. Then he had a very severe attack of gastro-intestinal catarrh, from which he recovered only gradually. On July 20th, pneumonia on the right side supervened, which carried him off within four days. There never was anything abnormal observed in regard to his urine during his last illness. No autopsy.

† Gerhardt's *H. d. Kinderkr.* 3, Vol. I, pp. 285 to 298.

‡ *Bull. gen. de Therapeutique*, 1888, p. 71.

The second case came under my observation last summer while I was substituting for Prof. Dr. A. Seibert, in the New York Polyclinic.

II.—*Louise G.*, 10 months old, had an obstinate gastro-intestinal catarrh during June last; while this was slowly improving, numerous furuncles appeared about the head, trunk, and lower extremities. While these were breaking and healing, others formed on the arms, etc. This extensive furunculosis led me to suspect sugar in the urine, since I have been led to diagnosticate diabetes mellitus three times by examining the urine of adults, suffering from general furunculosis.

On questioning the child's mother, I obtained the information that the little patient wanted to drink almost continuously, that she passed water very frequently, and that every time she was "wet through and through." I gave her instructions how to collect some urine which she was to bring with her the next time.

On July 25th, I received the first sample and examined it before the class. The urine was almost colorless; instead of a yellowish, it had a slightly greenish hue, however. To my great surprise I found the specific gravity to be extremely low; its surface was just sufficiently below the mark to show that it was somewhat more than 1,000, but it did not reach the next line of division. It will be readily understood that it did not contain either sugar or albumen.

The child now received the phenacetine treatment for its polyuria, 0.25 grammes (4 grains), being given three times daily. On July 30th, the specific gravity of the urine had risen to 1,004, its color was of a light yellow, and the child had not wetted itself as frequently. Under continued treatment the specific gravity gradually rose and the urine assumed its natural color.

The formation of furuncles also ceased and by the middle of August only two of them remained, one over the right temple and the other on the left arm, about the wrist. The specific gravity when last examined on the 15th day of August, was 1010. It is to be regretted that I was not able to follow the case up any further since the mother did not show up after this at the clinic.

The history of my third case is less satisfactory still.

III.—*Fred. I.*, 4 months old, was treated for gastro-intestinal catarrh like the former patient at the N. Y. Polyclinic, and about the same time, *i.e.* during June of last year. This lasted a few weeks. While the child was recovering from it, furunculosis also set

in, although it was not as severe as in the other case. The child's urine which was brought to me on July 25th, had hardly any color, and its specific gravity was found to be 1002. The child was given phenacetine, but unhappily we had no further opportunity to examine his urine. Diarrhœa soon set in again and the mother reported that she was unable to collect any of the urine, since it was always passed at the same time with the fæces. She stayed away about a week afterward and the case was lost to us.

The peculiar coincidence of two rare cases presenting at the same time, is not unusual, nor is their causeless staying away from a clinic.

IV.—*John W.*, 11 months old, was brought to my office on October 12th last. The mother reported that since several days the child, whose history contained nothing but a protracted icterus during the first five weeks of his life, had become very restless, crying almost incessantly, and that he wanted to drink almost continually. He had become considerably emaciated during the last month or so, since which time his illness seemed to have developed.

A physical examination of the child failed to elicit anything to account for the boy's condition. His liver was somewhat enlarged and seemed to be painful on slight pressure, but otherwise everything seemed to be normal. No fever.

I, therefore, instructed the mother to procure some of his urine, although she did not think that the child passed it oftener than usual. But that much she admitted that the quantity of urine passed every time seemed to be larger than formerly.

In order to appease the child without giving him too much to drink, she had given him a piece of sugar in a rag to suckle. This I forbid her to do and allowed her to give the child a teaspoonful of brandy and water or cold tea occasionally between the nursings. The latter she was to do every two hours. Placebo.

She did not appear until the 16th with a sample of the child's urine, which was almost colorless and had a specific gravity ranging between 1002 and 1003. No sugar and no albumen was present. I gave the child 0.25 grammes (4 grains) of phenacetine four times a day. On October 20th the specific gravity of the urine was still 1003 only, although it seemed to have somewhat more color. On October 26th the mother stated that the child was better, cried less and did not wet its clothes as thoroughly as before. But it drank just as eagerly as before. This urine weighed 1006 and had a well-pronounced amber color. Both, the bismuth and the indigo test failed to show any sugar; no albumen. On October 29th the specific gravity was 1010. On November 2d it was again down to 1005. I now increased the dose of phenacetine to 0.35 grammes (6 grains) four times daily. The specific gravity went up steadily after this; it was 1010 on November 5th, and 1012 on November 10th. There it remained and on the 15th of November when I examined it last, it was still at that figure. I now stopped the drug and the child has been well ever since.

On December 2d the specific gravity was 1013, a figure which may be considered almost normal in children who live exclusively on liquid diet.

The most interesting point in connection with polyuria is its *etiology*. In connection with this I may be permitted to refer to the well established fact of its heredity.

It was first shown conclusively by Weil that heredity must be considered a potent etiological factor in diabetes insipidus.

Weil reported the history of a certain family in which a hereditary liability to polyuria was to be traced through four generations. Among 93 members of this family as many as 23 (of which 12 were males and 11 females) suffered from diabetes insipidus.

In connection with the first case I was able to elicit the following facts in regard to heredity.

The mother of the first mentioned infant had passed urine very frequently and in large quantities up to the tenth year of her life and this constantly night and day. She was not sent to school for this reason until after she had completed her tenth year. At that time the polyuria ceased without treatment and without any visible cause. Since then she has been well, except a vaginal discharge which ceased after her confinement. She was at that time 24 years old. No other member of her family has been subject to polyuria as far as she knows—which does, of course, not at all preclude the possibility that such may have been the case.

In the other cases, I was unable to learn anything in regard to a possible hereditary taint.

The feature common to the first three cases is that in every one of them polyuria appeared after prolonged gastro-intestinal trouble. While in one œdematous effusions existed for a short time, the other two were subject to quite extensive furunculosis for many weeks; it was this condition which

led me to examine the urine, as I have stated. Nothing of the kind existed in the last case.

To consider the furunculosis as a manifestation of the tendency to necrotic and gangrenous inflammations, such as seen frequently in diabetes mellitus would, I think, be too rash, for it is, to my knowledge, not supposed to be a feature of diabetes insipidus.

It is not improbable that it was due to the absorption of some septic material from the diseased intestinal mucous membrane. In this regard, it is in place to state that in my experience as well as in that of others, infantile diarrhœa was followed in an exceptional manner by cutaneous affections during that summer.

As to the action and efficacy of the phenacetine, I have nothing to suggest. It can only be explained through its well-known influence on nerves and nerve-centers, polyuria being considered by most authors a nervous affection.

THE TOXIC EFFECT OF TOBACCO VAPOR, WITH A REPORT OF CASES.*

BY W. CARROLL CHAPMAN, M. D.,
LOUISVILLE, KY.

As the grand aim of medicine is to alleviate distress, the careful recording and description of rare diseases as well as the unusual manifestations of ordinary disease, would seem to be two of the most important features of professional literature. Another factor, and probably of no less importance than the first two, is the accuracy in diagnosis. The three cases I desire to report have been recorded at length and with care, and will be described with as much brevity as is consistent with the facts and my ability to outline the symptoms clearly. As to the diagnosis, while I feel that further and deeper research is necessary to make it positive, it is well supported by the physical and functional signs, associated with the fact that each patient had been daily subjected to the inhalation and absorption of fumes emanating from tobacco, and further, that these symptoms, when not so severe, would appear or disappear, according as the patient received the exhalation from tobacco into the system or not. Then I have been unable to find the record of any disease to which this train of symptoms can be applied with precision. On the other hand a grave defect, bearing on the diagnosis, is readily admitted; namely, the failure to make a chemical examination of the excretions. This error is due, principally, to having allowed myself to become so thoroughly convinced of the correctness of my diagnosis, which was concurred in by the consulting physician, as to fail to realize at that time the value of a chemical examination in confirming it, especially to the medical profession.

In treating of the toxic effect of tobacco vapor it is the intention of the writer to confine himself closely to the graver and more dangerous cases due to its inhalation or absorption, or both. The obscure effects of tobacco-smoking and the inhalations from cigarettes will not be considered.

Tobacco stemmeries have a process by which they get dry tobacco in a proper condition for stemming. This is done by means of a number of reservoirs containing steam generated from pure water, which is turned on the tobacco previously arranged, so as to receive and retain the necessary amount of moisture. When ready, this is carried to the men who do the stemming. The carriers are usually children from nine to fifteen years of age. Knowning then that the vapor of tobacco contains numerous basic substances of the picoline series, and several fatty acids, and probably nicotine and nicotianine, it can be readily seen how the systems of these children become saturated with these poisons.

Usually their presence is manifested during the first day or two by violent vomiting, retching, purging, and often a state of collapse, after which the system may become inured to them. Occasionally we find one whose constitution even by contact and time, although there is a certain amount of tolerence, refuses to receive them kindly, and emaciation begins, attended sooner or later by the following symptoms:

Case I.—I was called to see Willie C., aged ten years, April 3, 1889. Found him suffering extreme pain in the abdominal region, with the intensity centering at the umbilicus. Temperature, under the tongue, 100°; pulse 108, small, wiry and irregular; respiration 20 to 22, but irregular—several short, shallow respirations followed by one deep and gasping. Tongue glairy, red appearance and pointed. Patient constipated for the last several days; abdomen flat or rather depressed; urine scanty and slightly colored; skin dry, as were the hands and feet—the latter being a little cold. When

*Read before the Mississippi Valley Medical Association in October, 1891.

near the patient the odor of tobacco was so pronounced that I made inquiry regarding it, and learned that he worked in a tobacco stemmery, and further, that he had slight attacks of similar pains at several different times, except of milder form. Though the working clothes had been displaced by his night apparel, the odor was strong and led me to suspect tobacco as a cause. Not being able to make a satisfactory diagnosis at the time, I decided to use palliative treatment and study the disease further. Gave a hypodermic injection of morphia and atropia; ordered a large dose of castor oil to be followed by bismuth and quinia. After the patient had been given some relief I instructed the nurse to use turpentine stupes freely should the pain return.

The next morning (April 4th) I found the patient suffering pretty much in the same way as on the evening previous—more nervous and tossing from side to side. The morphia and atropia gave relief for several hours, when the use of turpentine stupes was begun and continued until the patient became so restless they could not be applied. The oil had failed to move the bowels. Immediately gave morphia and atropia hypodermically. Temperature 100°; pulse 112; respiration 22, and of the same character as on the evening previous; pupils contracted, expression marked for anxiety. He described the pains as sickening. Previous to the time he started to work in tobacco, he was plump, robust and healthy, but for the last several weeks had been decreasing in flesh and weight. Ordered another dose of oil and told the nurse to apply a sinapism of mustard to the abdomen, should the pains return before I saw him in the evening.

5 P. M.—Patient had just begun to suffer intensely when I arrived. Had been quiet through the day but slept none. Oil still refused to cause the bowels to act. Ordered it by the rectum with a pint of tepid water. Gave morphia and atropia and ordered the enema repeated in case it failed to act in one hour.

April 5th.—Patient had rested better the night before, but slept comparatively none. Pulse, temperature and respiration about the same as on the day previous. The enema had caused a scanty action upon the bowels —very dark, with greenish tinge to the liquid. No tenderness of the abdomen on pressure, except at umbilicus; pain still intense. Repeated the morpia and atropia. Although catharsis and diaphoresis were absent, I felt convinced that tobacco was the cause, and decided to push cathartic remedies to thorough effect and stimulate the skin to action. Believing there was no intussusception, I prescribed a full dose of calomel, podophyllin, extract belladonna and soda. Ordered the clothing and bedclothing changed, and the patient sponged with tepid water and a little ammonia, followed by mild rubbing; this to be repeated in the evening, at which time I administered morphia and atropia again.

April 6th.—Patient rested better through the night than at any time previous. Bowels acted two or three times; fæces black, with green tinge. Pain dull, sickening character; no material change in temperature, pulse or respiration. Liquid food with whiskey. Continued baths; prescribed morphia, belladonna, quinia and nux vomica.

April 7th, 8th, 9th, 10th, 11th, 12th and 13th.—Patient continued pretty much the same, temperature going to 101°, with a slight advance in pulse-rate on one day. No change in treatment, except to add pepsin and hydrochloric acid. Kept the bowels open by enema.

April 14th.—Abdomen tympanitic, with tenderness; nausea and vomiting. Patient complained that the capsules made him vomit; discontinued them. Pain intense, same character as before.

April 15th.—Was sent for to relieve the pain. Administered morphia and atropia hypodermically; prescribed deodorized tincture of opium, and ordered turpentine stupes over the abdomen.

April 16th.—No change.

April 17th, A. M.—Temperature 101,5°; pulse 120; respiration labored. Digitalis, whiskey, atropia. P. M., temperature 102°, pulse 130. Continued same.

April 18th, A. M.—Temperature 100°; pulse 108; respiration improved. Slept after 1 A. M. P. M., same as morning. Rested pretty well. Continued whiskey and digitalis.

April 19th.—Temperature 99°; pulse 100; respiration 18, more regular. Other symptoms improved.

Improvement was gradual from this on.

April 22d.—Facial neuralgia manifested itself and lasted several days. Gave morphia and atropia and prescribed iron, quinia and strychnia. Dismissed the case on April 29th, after three-and-a-half weeks of illness, with instructions for him never to work in tobacco again. He has obeyed, and now (two-and-a-half years later) the boy is inclined to be fleshy.

Case II.—Lizzie M——, aged twelve years. Worked in tobacco stemmery. Called

in on July 19, 1889. Patient was taken sick three days before with pains in the abdomen. The mother had treated her with castor oil, laudanum and hot applications, with very little relief. These remedies had answered the purpose on two or three other occasions within the last several weeks, but the pains had never been so violent. On the evening of the above date I found her condition as follows: Anæmic; violent pain in the abdomen with intensity centering at umbilicus; abdomen flat with only slight tenderness on pressure; constipated; urine, scanty and slightly colored; tongue, red and pointed; temperature in axilla, 100.5°; pulse 120, small and wiry and irregular; skin, dry; pupils, contracted; respiration, 24; four or five short and shallow followed by one deep and gasping. The odor of tobacco was present. Gave morphia and atropia hypodermically. Prescribed a cathartic, also digitalis, and ordered teaspoonful of whiskey every two hours.

July 20th, A. M.—Patient had rested the early part of the night; small action from the bowels, dark, greenish appearance. Pains have been severe for last hour or two; pulse, temperature and respiration same as evening before. Continued same treatment; gave morphia and atropia and ordered an enema. P. M.—Bowels had moved twice; fæces dark, greenish appearance. Repeated morphia and atropia and ordered patient sponged with tepid water and ammonia and rubbed dry. Liquid food.

July 21st, A. M.—Pulse, 130; temperature, 101.5°; respiration, 22 and more labored; abdomen, slightly tympanitic. Prescribed aromatic spirits of ammonia with the digitalis. Gave morphia, quinia and strychnia in capsules, increased the whiskey. P. M.—Condition same.

July 22d and 23d.—No change except abdomen little more tympanitic, and vomiting at times.

July 24th, A. M.—Vomiting, cannot retain the medicine in the stomach; pulse, 140; temperature, 100°; respiration so irregular can't be estimated positively. Whiskey, hypodermically. P. M.—No perceptible change unless for worse.

July 25th.—Patient sinking; pulse, fluttering; respiration, 10 and gasping. Died in the afternoon by asphyxia, after an illness of nine days.

I requested the privilege of making a *post-mortem* but was refused.

Case 3. Johnnie C——, nine years old. Called in on July 14, 1890. Patient suffering intense pain in abdomen, especially at umbilicus. Had a few slight pains a few days before, but stopped his work in tobacco stemmery and came home. The pains ceased without treatment. A day or two later resumed his work until the above date. Emaciated; abdomen, flat; very slight pain on pressure; temperature, 100°; pulse, 100, small, wiry; respiration, 22 and shallow; pupils somewhat contracted; tongue, bright red; constipated. Gave morphia and atropia hypodermically; castor-oil by mouth; prescribed tincture of opium deodorized to be given when the effects of the morphia began to wear off, provided the oil acted.

July 15th.—Patient rested very well through the night. Oil moved the bowels two or three times; dark, greenish actions; temperature, 99°; pulse, 90; respiration, 20 and easier. Diminished the opium with instructions to leave it off if pain ceased. Prescribed pepsin, pancreatin, bismuth and hydrochloric acid.

July 16th.—Left opium off and pains returned. Temperature, 99.5°; pulse, 96; respiration, 22. Began opium immediately. Ordered him sponged with tepid water and ammonia.

July 17th.—Patient improved; pulse, 84; temperature, 98.4°; respiration, easy. Prescribed iron, quinia and strychinia; improvement continued. Facial neuralgia developed on 19th instant and lasted two or three days.

I desire to state just here that, during the interval between cases 2 and 3, reported above, I saw two patients, who worked in tobacco, with symptoms similar to those reported, but greatly modified. To the first of these I gave castor oil, followed by pepsin, pancreatin, bismuth and muriatic acid, with instructions to stop work in tobacco. He followed my advice and has not suffered in that way since. To the second I merely gave castor oil with same instructions as to the first. He followed them for a few months, then returned to work in tobacco, which he kept up for six weeks when he came to me with the same symptoms as at first. Yielded to simple treatment, but slowly. Since case 3, I have had several mild cases. I invariably warn them to stop work in tobacco, especially where it is steamed. I believe all would have been well with the three cases reported had they stopped work in tobacco at the first warning pains.

Attention is called to two factors noticeable in all the cases, namely: The emaciation and the time each one had followed the occupation, that is, from six weeks to three

months. The three cases reported had not suffered from the vomiting and retching usually attendant upon young tobacco workers the first day or two. In the other or milder cases, I neglected to inquire regarding that point.

This paper would be incomplete without a review of these cases for the purpose of considering the relation between this cause and result.

Emaciation is one of the symptoms noticeable in persons suffering from the presence of tobacco vapor in their systems. Dr. Ydan Pouchkine, of Russia, has recently reported an interesting series of experiments relative to the influence of tobacco upon the digestive functions of the stomach. He concludes that the free hydrochloric acid of the gastric juice is diminished under the influence of tobacco and the motility of the stomach is increased. This would interfere with the digestion of the food not only by lessening the power of the gastric fluid, but by hastening the matter to be digested into the duodenum before it has been subjected to the influence of the gastric juice for a sufficient length of time. Consequently and in proportion as digestion is imperfect, would secretion and assimilation be deficient and emaciation result.

As to the particular ingredient or ingredients causing the symptoms reported, chemical examination would furnish the most weighty evidence. Having neglected that in these cases, I can only console myself by awaiting an opportunity to make that test at some future period. Our knowledge, though, of the substances entering into the composition of tobacco, and their separate and collective properties and actions upon the body furnish us material worthy of consideration.

In regard to nicotine, which has been suggested as a cause, I must say that I do not believe it for a number of reasons. In the first place, nicotine is not readily separated from tobacco unless treated by a fluid or vapor containing alkaline properties, potassa for instance. The vapor used at the stemmeries, I learned upon inquiry, was from water only.

Again, had nicotine been the cause, the effect would likely not have been so delayed and vomiting and purging have been present.

As to nicotianine, indications point strongly to its being a cause. According to Landerer it occurs only in dried tobacco-leaves, and has the odor of that plant, a point strongly in its favor, and that odor was so distinct in every case I have seen. It would seem, further, that the basic substances and fatty acids were causative agents, because authors have proved by physiological experiments that these cause contraction of the pupil, dyspnœa, abdominal pains, convulsions and death.

Why these symptoms have been so delayed in these cases, instead of the poisons manifesting themselves the first day or two, by retching, vomiting, etc., as is most generally the case, I am at a loss to say, and would suggest, by way of excuse, a cumulative effect.

The toxic effect of tobacco vapor and its treatment is a subject worthy of more consideration than the profession has accorded to it in the past, and I hope that the next few years, aided by diligent and careful investigation, will place the matter in a more intelligent light.

Society Reports.

SURGICAL ASSOCIATION.

THURSDAY.—EXECUTIVE SESSION.

The officers for ensuing year are as follows:

PRESIDENT.—Dr. Phineas S. Conner, Cincinnati.

1st VICE-PRESIDENT.—Dr. L. McLane Tiffany, Baltimore.

2d VICE-PRESIDENT.—Dr. Levi C. Lane, San Francisco, Cal.

SECRETARY.—Dr. J. R. Weist, Richmond, Ind.

RECORDER.—Dr. J. Ewing Mears, Philadelphia.

TREASURER.—Dr. John B. Roberts, Philadelphia.

MEMBER OF COUNCIL.—Dr. Claudius H. Martin, Mobile.

The committee recommended the following resolution, which was adopted:

Resolved, That the Association hereafter hold each triennial meeting at Washington, and that other annual meetings be held at such time and place as the Association may name.

It was decided to hold the next meeting at Boston, in June, 1892.

The following were elected to membership:

Dr. J. S. Wright, Brooklyn, N. Y.

Dr. E. W. Walker, Cincinnati, Ohio.

Dr. George R. Fowler, Brooklyn, N. Y.

The following honorary members were elected:

Mr. John Chiene, Edinburgh.
Mr. Reginald Harrison, London.
Mrs. Thomas Bryant, London.
Mr. Arthur Edward Durham, London.

THURSDAY SESSION.

RECURRENCE OF CANCER OF THE BREAST, BY DR. FREDERICK S. DENNIS, M. D., OF NEW YORK.

Only those cases were included in which a microscopical examination of the tumor has been made. The necessity of an investigation of carcinoma of the breast is shown by the fact that in England alone 7000 deaths occur annually from carcinoma, and a large proportion of these are cases of the breast. It has been demonstrated that cancer is a disease which is slowly increasing in civilized nations. A study of the subject shows us that there are 75 per cent. of recurrences. These include cases of incomplete operations, *i. e.* when axillas have not been opened. In the primary growth at the beginning, the neoplasm is of local origin. Early and complete removal of the growth relieves the local disease, but the operation does not relieve the predisposition, or susceptibility, or capability for the recurrence of the disease. It is possible that the capability is limited to certain extents.

First, the recurrence of carcinoma of the breast is influenced by the period of time from the appearance of the growth to the date of the operation. In the cases of the author in which the cure had continued for three years or more the tumors were removed on an average, six months from the date of their first recognition in the breast. In all the cases of permanent cure, the axillary glands were not invaded.

Second, recurrence is influenced, by the extent to which infiltration has taken place by any one or all of the three well recognized ways of dissemination. If, when the tumor has existed long enough to show extension in these directions, the growth has been of long duration.

Third, recurrence is influenced by the radical character of the operation itself. Complete removal of the breast is essential. The method of Mr. Stiles, of Edinburgh, by which the tumor after removal is treated with dilute nitric acid in order to show whether or not the incisions have been made in healthy structures and all the diseased structure has been removed, was described. The reported mortality of the operation is high, but in the author's 71 cases there had been but one death and that was from continued bleeding in hæmophilia. In operation not only the breast but the axillary glands were removed in most cases.

Fourth. Recurrence is influenced by the histological character of the carinoma itself. Where the structure differs slightly from the normal, the clinical history is favorable. In none of these cases was there recurrence. Where there is great departure from the normal type, the clinical history is unfavorable. The more embryonic the structure, the greater the chance of recurrence.

Fifth. The recurrence is influenced by the simultaneousness in both breasts. This occurs in five per cent of the cases. These patients are very liable to these recurrences.

Sixth. Recurrence is influenced by the personal factor of the individual, such as age, sex, marriage, fecundity, sterility, pregnancy, traumatism, heredity, menstruation, metasosis, mental condition, locality, etc.

Seventy-one cases of carcinoma of the breast, which had been operated on, were referred to. In one there had been death from hæmophilia. In nearly all the axilla was opened. The operation consisted of excision of the entire breast, with all contiguous skin, the para and peri mammary, fatty areolin tissue, the pectoral glands, the pectoral fascia and also removal of the axillary glands and fatty axillary tissue. In some cases the supra clavicular glands were removed, and in one case excision of the ribs was done. The per centage of permanent cures amounted to 30 per cent. The author held that with early and radical operation, recurrence of carcinoma of the breast will be comparatively scarce.

DISCUSSION.

Mr. Thomas Bryant, London, believed firmly in the local origin of carcinoma although we must admit that there may be a predisposition on the part of the patient to the development of the disease. The disease should be treated at an early period, and this brings in the question of diagnosis. Many cases do not come under observation until the disease is well advanced, because the patient imagines that a disease unassociated with pain cannot be cancer. Where induration appears in a breast during the period of functional activity there may be some hesitation in the diagnosis, but in some thirty cases of this kind he had recommended an immediate operation, and in all the cases the disease was shown to be malignant. In none has recurrence taken place. When

the disease has advanced somewhat further with dimpling and puckering of the skin and some immobility we may get a good result by making a thorough operation. He had had some cases without recurrence for from five to twenty years. In the more advanced cases the surgeon should limit his operations to those in which there was a reasonable prospect of removing all the diseased structure. He does not remove the axillary glands in every case. If the glands be enlarged or the disease extend upward in that direction he removes the glands thoroughly. When the disease is quite local and there is no evidence of axillary involvement, the axilla is not opened. In the atrophic form of cancer he thought it better not to interfere unless the tumor was giving rise to great inconvenience. Operation in these cases is often followed by a more rapid form of growth. Again in the form of cancer where the lymphatics can be traced distinctly, and the breast has a brawny feel—the lymphatic form of cancer—the surgeon does no good by interference.

Sir William McCormac, London, thought that the axilla should be opened in operations for carcinoma of the breast, for two reasons, viz: An examination of 117 cases of cancer of the breast showed that in all but two there was axillary involvement, and second, in ninety per cent of the recurrences the disease appears in the axilla.

Dr. Lewis S. Pilcher, Brooklyn, thought that the term "recurrence" was not applicable to many of these cases, and that in many the disease was simply a continuance of the former growth. If the case goes one year without the appearance of return of the disease, it may be considered that the disease has been removed, and if it appear later it can be regarded as a recurrence, a renewed or new attack of cancer. In every case of cancer there is a predisposition to the disease, and we should search for some agent to counteract this constitutional predisposition which we can use in addition to operative measures. Arsenic has for many years been used for this purpose. Dr. Wright, of Brooklyn, has suggested the use of carbonate of lime for the same purpose.

Dr. L. McLane Tiffany, Baltimore, did not think we could set any limit to the time of which recurrence might take place. He had had the disease return eight years after the operation. He was a firm believer in the local origin of cancer. The date at which this disease is recognized varies much. In some the disease comes before the surgeon shortly after its commencement, while in others the tumor has reached considerable size. The time at which the disease is discovered by the patient bears no relation to the time of its commencement. Too much stress had not been laid on the necessity of thorough operation. In only two cases out 80 operations for cancer of the breast had he found the axillary glands not enlarged. The pectoral fascia should be removed, and at times the portions of the muscles should be cut away.

Dr. Kingston, Montreal, believed that cancer was essentially a local disease. If we believe this, operation should be done at as early a date as possible. The glands should be removed not only from the axilla, but from its neighborhood if they are enlarged, but this should not form a necessary part of the first operation. Such a procedure adds greatly to the discomfort and to the danger. Where there is the slightest suspicion of involvement of the glands, they should be removed. If there should be recurrence the operation should be repeated as often as circumstances seem to warrant.

Dr. Joseph Ransohoff, Cincinnati, reported thirty cases of removal of the breast for cancer, without a death. He thought that the danger of the operation was not materially increased by opening the axilla.

Dr. C. B. Nancrede, Ann Arbor, said with reference to the three year limit that this had been proven to exclude 98 per cent. of the recurrences. It is impossible to tell whether or not, the axillary glands are involved without opening the axilla. Unless this is done the majority of the cases will be left unbenefited. He advised that the axilla be opened first, and if the glands could not be removed, to close the wound and not remove the breast.

Dr. J. R. Weist, Richmond, Ind., had operated 55 times for cancer of the breast and makes it a rule to open the axilla in every case.

Dr. Geo. W. Gay, Boston, felt that there was no such thing as a local origin of cancer as we have the local origin of a fatty tumor. When it can be shown that a cancer taken out, will not return just as a fatty tumor when removed does not return, then we can prove the local origin of carcinoma.

Dr. Edward M. Moore, Rochester, always operates in as thorough a manner as possible. He always opens the axilla and did not think that it added to the risks of the operation. He did not agree with Mr. Bryant in regard to the atrophic cases in old individuals. In these, he recommended

operations considering recurrence very improbable. He reported one case living 17 years after operation, and now 79 years of age.

A CASE OF DIFFUSE FIBROMA, WITH A TENDENCY TO INTRA-CANILICULAR GROWTH OF BOTH BREASTS, BY DR. C. B. PORTER, OF BOSTON, MASS.

Mrs. M., age 37 years, resident of Nova Scotia, was admitted to the Massachusetts General Hospital. Has had two children, the youngest ten years old. Three years ago she discovered a hard lump in the right breast which gradually increased in size. Three months later the right breast commenced to enlarge. The breasts continued to slowly enlarge until three months ago, when a rapid increase took place, and the breasts soon became burdensome by their size and weight. On examination she was found to be pale, emaciated, and with ovarian fæces. Right breast, largest circumference 38 inches; length from chest wall to nipple, 17 inches; circumference of base, 23 inches. Left breast, largest circumference 28 inches; length from chest wall to nipple, 14 inches; circumference at base, 23 inches. Throughout both breasts were felt movable, hardened masses of irregular outline varying in size from an orange to a closed fist.

It was decided to remove the left breast first. The breast was transfixed at the base with two skewers, and constricted below this with a tightly drawn rubber tourniquet. The breast was then removed, and but little blood lost. Three weeks later the right breast was removed. Twenty days after the second operation the patient was permitted to leave the hospital to visit friends, but instead she returned to her home, requiring a long sea journey. A week later she developed erysipelas. This had much improved in four days when she suddenly aborted a month fœtus.

The weight of the right breast after removal was 43 pounds, and that of the left 17 pounds, a total of 60 pounds.

A resumé of three reported cases was added.

Dr. J. M. Barton, of Philadelphia, reported a similar case, on which he had operated, and in which one breast was involved. Adjourned Thursday.

FRIDAY MORNING.

The committee to which was referred the suggestion in the President's address offered the following resolution, which was adopted:

Resolved, That the President appoint a committee with authority to confer with the friends and admirers of Professor S. D. Gross, and with the profession at large, for the initiation of a movement on the part of the Association, having for its object the erection of a monument to Dr. Gross in the city of Washington.

As the matter is an important one, the President stated that he would announce the committee in a few days.

TREATMENT OF FRACTURES INVOLVING THE ELBOW JOINT, BY DR. LEWIS A. STIMSON, NEW YORK.

The special interest of the subject arises from the frequency with which fractures of the lower end of the humerus are followed by more or less diminution of the functions of the elbow joint and by deformity of the region or of the limb. The paper was devoted mainly to a consideration of the causes of these unfavorable results.

Causes of limitation of motion. Permanent stiffness after simple fracture is commonly due to change in the shape of the articular surfaces or in their relations to one another, that destroys the coincidence of the axis of curvature with that of motion; or to an overgrowth of bone upon the surface of the humerus, arresting the movement of the olecranon or coronoid process; or to more or less extensive ossification of the ligaments and capsule.

Overgrowth of bone from traumatism is more frequent in the young than in the adult, as limitation of motion may be caused by bony outgrowth from the humerus, itself the result of a persistent displacement of a fragment or of separation of the periosteum. The most efficient way to prevent it, lies in an exact diagnosis and reduction of displacement and in the avoidance of any subsequent irritation of the periosteum.

Limitation of motion from thickening of the capsule and peri-articular tissues by the process of inflammation is as a rule a temporary condition. In the more permanent form the lesions are more extensive. The soft tissues are torn and a true cicatrix results. The thickened tissue may become ossified in whole or in part. This cause of limitation has been attributed, but improperly so to prolonged immobilization and has led to the practice of passive motion in the early stages with the object of preventing its occurrence. Observation and experiment has, however, shown that immobilization is not itself a cause of ankylosis, but that it is an efficient agent against

inflammation, and that passive motion is powerless to prevent ankylosis when conditions contributory thereto are present. Passive motion therefore is either harmful or useless. The primary cause of the exudation and of the proliferation of connective tissues that are the anatomical obstacles to motion, is of course the original traumatism. The secondary cause is the following reaction. The only factor that can be increased or diminished by treatment is the second, that is the inflammatory reaction. Rest is universally admitted to be the best antiphlogistic measure that can be applied to an inflamed joint. An important disadvantage of rest at once suggests itself namely, that the torn tissues may unite with shortening. Both clinical observation and theoretical considerations indicate that passive motion in the early stage does not avoid this disadvantage, but actually increases it. In the present state of our knowledge it seems that a certain amount of limitation is unavoidable. Massage, however, hastens the absorption of exudation and the restoration of mobility, as does also permanent elevation or suspension of the limb. Reunion with shortening may be opposed by change in the attitude of the limb every few days. At a later period passive motion has its value, but in the early stages it is to be avoided.

In regard to deformity reference was made to one only, that commonly known as the "gun stock" deformity due to unreduced displacement of the internal or external condyle. In order to avoid this deformity the displacement should be reduced by pressure upon the fragment or by abduction of the extended forearm until its outward deviation is equal to that of its fellow and immobilization, by dressings that will not reproduce the displacement.

Treatment.—The first element in the treatment is the reduction of the displacement. If necessary an anæsthetic should be employed. In supra-condyloid fractures permanent traction is usually necessary to overcome the displacing action of the flexors and extensors. This can be effected by vertical suspension of the limb, the patient being kept in bed or by a weight suspended from the upper part of the flexed forearm while the patient is erect. The former method was recommended for the first fortnight of treatment, especially in compound fractures. Suspension is made by strips of adhesive plaster placed along the front and back of the forearm and attacked to the support by India-rubber cords or a weight and pulley. In simple fractures the other method may be employed. The limb is encased in plaster-of-Paris with the elbow at the right angle. The wrist being placed in a sling and a weight not exceeding five pounds suspended from the elbow.

In inter-condyloid fractures with marked separation, there is no practicable means of surely maintaining reduction and considerable limitation is to be expected. In these cases a broad heavy posterior splint covering about two-thirds of the circumference of the limbs, the elbow being at a right angle, was recommended.

In fractures of either condyle the treatment is by a posterior rectangular splint, either of metal or plaster. The forearm has been supported across the chest by a sling at the wrist. In some cases treatment in full extension has been employed. After this method has been employed for the first ten days or fortnight, recourse is had to the position with the elbow at a right angle.

Gentle massage will hasten convalescence. It may be advisable to change the position of the limb during treatment and if great limitation is to be expected, that attitude should be given to the joint in which, if stiff, the usefulness of the limb will be greatest. In supra-condyloid and inter-condyloid fractures, the splint should be worn six weeks and in fractures of the condyles, for about four weeks. After removal of the splint, the arm should for a few days be supported in a sling if necessary. Passive motions may at this time be resorted to increase the range of motion.

DISCUSSION.

Dr. N. P. Dandridge, of Cincinnati, agreed with what had been said by the reader of the paper and referred to two cases occurring under his observation. In one case of simple fracture from great violence in which nonunion had occurred, the arm was treated in a position of almost complete extension. The second case was one in which after fracture at the elbow joint a projection of bone pressed upon the median nerve causing severe pain and atrophy of the muscles in the distribution of the nerve. The case was seen three months after the accident. Removal of the bone was followed by relief of the pain and a gradual restoration of the function of the muscles.

Dr. R. A. Kinloch, of Charleston, thought that in simple fracture about the elbow, if seen early and the ordinary principles in regard to the treatment of fractures be applied, the result would be good. Probably in a

large number of cases we must expect some restriction of movement. The most important element in the treatment is the proper reduction of the fragments. This should be done at once, an anæsthetic being employed if necessary. The proper reduction of the fragments is determined by testing the functions of the joint. The second indication is to retain the fragments in the proper position. If the case is treated with intelligence it makes little difference what way the splint is applied or whether it is treated in flexion. The position is to be determined largely by the peculiarities of the individual case. He was himself inclined to favor the extended position.

In regard to passive motion used early, he thought that it did more harm than good. If the parts have been properly reduced and held in position and there is danger of subsequent trouble, passive motion may begin in three or four weeks.

Dr. E. M. Moore, Rochester.—In a fracture of the internal condyle the cause of the displacement is the flexor muscles and to relax these muscles the arm is to be placed in the flexed position. In fractures of the external condyle he had also found this position the preferable one, for when the forearm is flexed thedense fascia on the front of the arm is rendered tense and acts as an efficient splint. He objected to the extended position entirely. He treats all fractures about the elbow joint with the exception of fractures of the olecranon in the rectangular position for the first ten days or two weeks. Latural splints are used with the object of pressing the fragments together after the tenth day. The fracture is dressed every other day. The angle of the splint being changed a little each time so that the arm passes from almost complete flexion to almost complete extension. He had never had the slightest difficulty in any case since adopting this mode of treatment.

Dr. James M. Cann, Pittsburgh, said that it was not always easy to determine the exact nature of these fractures about the elbow-joint even with the patient under the influence of an anæsthetic. While the patient is under the anæsthetic the preliminary dressing should be applied. He recommended the use of the internal angula splint preferably that suggested by Dr. Packard. He did not favor the use of passive motion at an early stage. Passive motion should not be resorted to prior to the twentieth day.

Dr. John B. Roberts, Philadelphia, thought that the teaching advocated by some of the speakers was to a large extent dangerous and incorrect, that is that injury about the elbow joint should be treated in the flexed position. He believed that except in unusual cases these fractures should be treated in the extended position according to the doctrine advocated by Dr. Allis. In this way the gun-stock deformity is avoided. He now approached fractures of the elbow with the same certainty of getting a good result as he did fractures of the lower end of the radius.

Dr. S. H. Weeks, Portland, dwelt upon the fact that all authorities, with few exceptions, advised the flexed position in the treatment for fractures about the elbow joint. Until there was more positive evidence of the value of the extended position he thought it better to continue to treat these fractures in the flexed position. He employed passive motion in a modified way. After two weeks' treatment the splints are removed and the joint moved gently about, but not sufficiently to cause pain. This simply alters the relations of the parts without doing any damage.

Dr. L. McLane Tiffany, Baltimore, thought that as good results were reported from various dissimilar methods of treatment we must conclude that the prognosis of elbow injuries depended more upon the patient than upon the surgeon. Fracture of the elbow is rare in adults and common in children, and in children with reasonably good treatment there should be a good result and by the time adult age was reached the motion would be almost perfect. In the adult the prognosis is more grave. He had had good results both with the flexed and with the extended position. In compound fractures the secret lies in the relief of tension irrespective of the apparatus employed. Incision up and down the arm through the strong fascia should be made as freely as may be required.

RETRO-PERITONEAL TUMORS—THEIR ANATOMICAL RELATION—PATHOLOGY, DIAGNOSIS AND TREATMENT, WITH REPORT OF CASES, BY ALBERT VANDERVEER, M. D., OF ALBANY.

As our experience in abdominal surgery increases, we find that there are yet many problems that confront us, and of these problems there are none which require more careful research and are capable of greater improvement, both in operative management and in prognosis, than the new growths arising from the retro-peritoneal space. In order to bring this subject more fully to the attention of the Association, the following cases are reported:

Case 1.—Miss S., aged 42 years, consulted the author in March 1882, on account of a tumor located in the back. This was first noticed fifteen years previously. Examination showed a large tumor attached to the right side of the spine at the level of the first lumbar vertebræ. It seemed attached to surrounding tissues of a smooth contour and hard to the touch. Operation was advised but declined. The tumor continued to increase in size until November 1888, when she died from other causes. The autopsy showed the origin of the growth to be the connective tissue about the right kidney. It was encapsulated and could have been easily removed. It weighed eight pounds. The microscope revealed the presence of fat and myxomatous tissue with an abundant small round cell infiltration.

Case 2.—Mr. V., aged 42 years, married. Was first seen May 28, 1889. Five years ago strained his back. The pain following this has not been relieved by any treatment. Three months ago he became worse; the abdomen began to enlarge. The pain was more severe. He lost appetite and flesh. The ankles became œdematous and a distressing cough developed. The urine was scanty and high colored but free from albumen and casts. The abdomen was more prominent on the right side. Fluctuation could not be elicited but palpation gave an impression similar to that of a lipomatous tumor. On the right side there was flatness from the nipple to the crest of the ileum with the exception of a narrow space along the border of the ribs where there was a zone of resonance. The probability of the growth arising from the kidney was strong and an exploratory abdominal section advised.

This was done June 1, 1889. An incision five inches long being made over the external border of the right rectus muscle. The growth was reached and the capsule divided, but from its attachments it seemed futile to attempt its removal. The patient recovered from the operation and for a considerable period was relieved of pain. The growth continued to increase in size, and the patient died October 21, 1889.

The tumor which weighed fifty-six pounds originated behind the peritoneum and was attached to the right kidney. The microscope showed it to be an adipose tumor presenting a condition of myxosarcoma with sarcomatous infiltration.

Case 3.—Mr. N., aged 39, a brass worker by occupation, began to have vague abdominal symptoms late in the year 1888, with failure of flesh and strength. In June, 1889, he developed jaundice and a tumor was found in the left hypochondriac region and lumbar region. This was as large as a child's head. An exploratory operation was advised but refused. It was believed that the growth was connected with the left kidney. The tumor continued to grow and in November 1889, the patient died. The tumor was found to have sprung from the region of the left suprarenal capsule and involved it. It also surrounded the kidney. It weighed six and one-eighth pounds. The microscope showed an appearance similar to that in case two, but with greater preponderance of sarcomatous and myxomatous elements.

A careful study of the reported cases and of the literature of the subject impresses one with the belief that the most frequent origin of these growths is in the connective tissue of the capsule of the kidney, and that the next most frequent seat is the supra-henal capsule. None of these tumors can be said to be absolutely benign, even those which are made up entirely of histological elements, such as lipoma, fibroma, or myoma. While they show no great tendency to recurrence after complete removal, yet, from the great size to which they develop and their tendency to undergo degenerative changes they can not be classed as innocent growths.

In many of the reported cases the origin is not stated and indeed it would, from the subsequent changes in anatomical relations, seem quite impossible to determine the exact origin of many of the large retro-peritoneal growths. They almost always present themselves in the line of least resistance, that is anteriorly. Careful study of these tumors shows them to be of a mixed variety, containing both the elements of the lipoma and myxoma tissues which are histologically very closely associated. Fat is developed from embryonal mucin and in post-fœtal life occupies those spaces in the economy which later, in the fœtus is of myxomatous elements. Doubtless many of these growth arise, under suitable conditions, from congenital neoplasms. These growths often become cystic and reach immense proportions. They often present a numerous round-celled infiltration pointing to a sarcomatous element. Sarcoma either in its typical form or in combination with other tissues often occurs.

Diagnosis.—There is not a single symptom that is pathogenic and the diagnosis is more dependent upon the process of exclusion. Tumors of the other abdominal and pelvic organs as well as aneurisms and tumors of the abdominal wall must be excluded. As already stated many of these tumors have

their origin in the capsule of the kidney or the connective tissue surrounding it, these present, in their earlier stages at least, physical signs differing in no respect from tumors of the nephritic parenchyma. In none of the cases reported has renal hæmorrhage or albuminuria, with or without casts, occurred, conditions which are the rule with tumors of the parenchyma of the kidney a valuable adjunct in the diagnosis consists in noting the relation of the tumor to the intestinal tube as shown by the insufflation of hydrogen gas.

Prognosis.—Without operative interference there is but one termination. The rapidity with which the fatal result is reached varies with the character of the growth. The mean duration of life after the discovery of the tumor is about nine months. Operative treatment offers much promise. The immediate mortality of the operation is great, yet from the hopelessness of the condition, it is to be urged with great earnestness.

In operations for the removal of retro-peritoneal growths, the choice of incision, will usually fall in the line of the linea semilunaris. By the separation of the peritoneum from the internal border of the tumor, it may be attached to the internal border of the abdominal wound, making the whole field of operation extra-peritoneal. The incision of the posterior fold of the peritoneum should be external to the attachment of the mesentery of the colon, although not absolutely necessary. In the removal of the growth by enucleation, care should be taken to determine the source of the blood supply and the relation of the great vessels. There are likely to be large thin-walled veins deep in the wound, requiring ligature. At times it will be found necessary to remove the kidney with the tumor, as in all abdominal work, the operator should be prepared for any and every complication. After enucleation, the cavity must be thoroughly drained. The after treatment is the same as all other severe abdominal sections.

Like all other conditions in surgery, there is certainly a better understanding of these cases going on. A more correct and early diagnosis, as is the case in all that pertains to medicine and surgery, will surely bring a larger percentage of recoveries.

These are purely surgical cases, no medicines, no mineral waters or baths, electricity or other lines of therapeutics having, as yet, been of any service.

The paper was appended by a complete bibliography of retro-peritoneal new growths.

INTRA-THORACIC SURGERY—BRONCHOTOMY THROUGH THE CHEST WALLS FOR FOREIGN BODIES IMPACTED IN THE BRONCHUS, BY DE FOREST WILLARD, M. D., PHILADELPHIA.

Dr. Willard gave the results of a number of experiments on dogs in which an opening was made in the chest walls, one or more ribs excised and the bronchus thus reached either anteriorly or posteriorly. The operations were all fatal.

The following conclusions were presented:

1. In dogs, the bronchus can be reached either anteriorly or posteriorly through the chest walls, but the anatomical position is in such close proximity to large and important structures that safe incision is a matter of extreme difficulty and danger.

2. Bronchotomy through the walls of the thorax is an operation attended with great shock from collapse of the lungs and until the technique is further advanced is liable to result in immediate death.

3. Collapse of the lung is more serious in a healthy organ than in one previously crippled by disease.

4. The serious inherent difficulties are shock, suffocation from lung collapse, enormous risks of hæmorrhage from pulmonary vessels, injury of or interference with the pneumogastric nerve, great and fatal delays owing to the exaggerated movement of the root of the lung caused by the excessive dyspnœa.

5. Closure of the bronchial slit is slow and dangerous; to leave it open causes increasing pneumothorax by its valve action and also permits the entrance of septic air into the pleural cavity.

6. Although a foreign body can be reached by this route, yet removal is hazardous. To secure a subsequent complete cure seems in the present state of knowledge very problematical.

7. When the presence of a foreign body in the bronchus is definitely determined, and primary voluntary expulsion has not been accomplished, there is great danger in permitting it to remain, even though it may but partially obstruct the tube, the risks both of immediate and of subsequent inflammation are serious.

8. Low tracheotomy is then advisable when the presence of a foreign body is certain, it adds but little to the risks and affords easier escape for the object even when extraction is not feasible.

9. *Subsequent dangers arise from severe and prolonged instrumentation, not from tracheotomy.*

10. Voluntary expulsion is more probable after than before tracheotomy.

11. Tracheotomy is permissible even after an object has been long in position unless serious lung changes have resulted.

12. The question of tracheotomy will depend largely upon the form, size and character of the foreign body.

13. The term bronchotomy should be limited to an opening of the bronchus, and should not be employed to designate higher operations.

14. The risks from thoracotomy and bronchotomy following unsuccessful tracheotomy, are much greater than the dangers incurred by permitting the foreign body to remain.

Discussion.—Dr. J. R. Weist, of Richmond said that from a study of one thousand cases in which a foreign body was impacted into a bronchus, he reached the conclusion that the chances of the patient were better if left alone than if an operation of what was formerly called bronchotomy was done.

Dr. S. H. Weeks, of Portland, thought that in these cases tracheotomy should be performed as this offers a chance of reaching the foreign body and also offers a chance for the spontaneous expulsion of the body. It occasionally happens that the body is forced up against the vocal cords and then falls back or else suffocates the patient before relief could be afforded. He reported the case of a child ten years old, who had so gotten into the trachea a screw cap that was used to close a pocket flask. It had been there several days before the patient came under observation. It was decided to open the trachea, this was done and the patient suspended but the foreign body did not escape. The patient was then placed in the horizontal position and the attempt made to remove the cap with forceps. It could be felt but not grasped. After working unsuccessfully for some time, the patient was again suspended and the attempt with the forceps renewed and at once the body was grasped and removed. The patient made a perfect recovery.

Dr. Kingston, of Montreal, reported a case in which he had removed an artificial incisor tooth with its attachments from the trachea where it had remained for three months. The operation necessitated prolonged manipulation but was followed by no bad results.

Dr. Howard Marsh, England, thought that on account of the danger of leaving the foreign body in the bronchus, the uncertainty in regard to the possibility of removal until the attempt is made and the safety of tracheotomy, the operation should be performed. The operation should be performed in all these cases as it gives the patient a chance where otherwise he perhaps has none.

Mr. Arthur Edward Durham, of London, agreed with the author of the paper that the operation through the chest wall was a dangerous and doubtful procedure. The more he saw of these cases the more satisfied was he that the proper thing to do where there is clear evidence that a foreign body is impacted in the bronchus, is to open the trachea low down and endeavor to remove the foreign body or to facilitate its spontaneous expulsion. This opinion was the result of considerable experience.

Dr. Lewis A. Stimson read a paper on "Old Unreduced Dislocations of the Elbow."

The following papers were read by title:

"Fractures Involving the Upper Third of the Femur, Exclusive of the Neck;" by Dr. O. H. Allis, Philadelphia.

"Fractures of the Bones Which Form the Elbow Joint, and Their Treatment;" by Dr. Levi C. Lane, San Francisco.

"Hæmiplegia With Aphasia, Following Ligature of the Common Carotid Artery;" by Dr. J. Ewing Mears, Philadelphia.

"Investigation of Pistol Shot Wounds of the Skull and Their Treatment;" by Dr. E. H. Bradford, Boston.

"The Results of Experiments in the Filling of Cavities of Bones Following Operations for Caries;" by Dr. E. H. Bradford, Boston.

After extending a vote of thanks to the retiring president the Association adjourned to meet in Boston, Mass., in June 1892.

Selected Formulæ.

SOLVENT FOR DIPHTHERITIC MEMBRANE.

℞
Pepsini..... ....ʒiss.
Ac. hydrochlor. dil.....ℳj.
Aq. dest.
Glycerini, aa.....ʒss.
M. Sig. Paint.

—*Canada Lancet.*

PILL FOR TUBERCULOSIS.

According to *L'Union Médical* Chauvin uses the following pill:

℞
Iodoform.....¾ grain.
Dover's powder.....1½ grains.
Extract of gentian enough to make a pill.

Give one pill three times a day immediately after meals.—*Med. News.*

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NEVER ROLL A MANUSCRIPT! Try to get an envelope or wrapper which will fit it.

When it is desired to call our attention to something in a newspaper, mark the passage boldly with a colored pencil, and write on the wrapper "Marked copy."

The Editor will be pleased to get medical news, but it is important that brevity and actual interest shall characterize communications intended for publication.

LEADING ARTICLE.

CERTAIN CAUSES OF FAILURE IN THE USE OF PESSARIES.

The reason why the use of pessaries is condemned by some, is because they fail to appreciate the real status of the instrument. In order to accomplish definite results it must be used under definite conditions. Perhaps the most frequent cause of disappointment to the inexperienced physician in the use of the pessary, and of discomfort or even injury to the patient, is the failure to realize that pelvic inflammation—salpingo-oöphoritis—is either a relative or an absolute contra-indication to its employment. Malposition of the uterus is a matter of secondary and minor importance, in the presence of advanced tubo-ovarian inflammation. As well may we treat a uterine lesion when a large ovarian cystoma is present. Again malpositions of the uterus are frequently of a purely secondary or symptomatic nature. For example we have "anteflexion, and retroflexion with adhesions." This term simply illustrates the persistence of an old nomenclature. The real disease is almost always a chronic peritonitis, or the remnants of a peritonitis—the uterine malposition being simply an accident in the course of the disease. Whether it is best to attempt the reposition of the organ in such cases depends entirely on the nature of the peritonitis and the state of the tubes and ovaries. In some of these cases in which the tubo-ovarian condition does not require operation, an Emmetts pessary of suitable size will afford relief by taking off the strain from adhesions, but broadly speaking pessaries are contra-indicated in the entire class. Again retroversion or flexion and prolapse of the uterus growing out of laceration of the levator ani muscle is an illustration of malposition which is secondary or symptomatic. The lesion is the laceration. Other factors may enter into the case, as the tonicity of the tissues in general, the habits of the patient, etc., but the primary fact is the tear in the muscle, or, as it is generally stated, in the perineum. In this broad group of cases the utility of pessa-

ries is undoubted, but the results to be gotten in the individual case depends strictly upon the conditions present. The greater the muscular lesion, and the more the patient must do manual labor, the less can be accomplished by pessaries. When the supporting action of the pelvic floor is markedly deficient by reason of the laceration, a suitable plastic operation is indispensable to a cure. When this has been done the pessary may prove very useful in the cure of the uterine malposition which remains. But when the laceration is slight and the loss of support is but little, if the patient does not need to do manual labor, she can be made comfortable and relatively well by maintaining the uterus in its normal position by a suitable pessary.

The field in which the pessary is most useful, and its employment most logical, is in the treatment of simple retroversion and flexion, and prolapse. The rationale of its use is that it keeps the uterus in proper position, while the cause of the displacement is removed, and thus the secondary consequesces of the displacement are cured. For example, the retroversion due to subinvolution of the uterus following labor is curable by maintaining the uterus in proper position while the subinvolution is combated by local depletion, with glycerin or the artificial leech, by the use of ergot, the regulation of the bowels, attention to the general health, and the avoidance of undue exercise—lactation being maintained when possible.

Finally, the practitioner will experience the least disappointment in the use of the pessary, who will regard it as a mechanical agent capable of producing certain results only in a line of treatment, and who will consider the faithful employment of the other measures or agents indicated as being of equal importance in effecting a cure. Not only that, but he must have due regard for the contra-indications present. The pessary has done harm enough as a "cure all" for the manifold ailments of women, and the day should be past when it can be used as the "routine treatment."

SYPHILIS AND GASTRIC ULCER.

An interesting case is reported in the September number of the *British Medical Journal*, from the service of Dr. J. Keser, at the French Hospital, London. The point of interest is that it indicates that syphilis may greatly influence the course and treatment of gastric ulcer.

Dr. Keser's patient was an unmarried female aged 19 years, who presented on admission the classical symptoms of ulcer of the stomach. Careful treatment with various drugs failed to relieve her, and after about three months, with no improvement in her condition, it was discovered that she had condylomata on the labia majora and mucous patches on the tonsils. Antisyphilitic remedies were substituted for all other treatment, and a strikingly rapid improvement began and proceeded to an uninterrupted convalescence.

From the published account of this case, it would appear that the presence of the syphilitic virus in the blood can delay or even prevent the healing of a gastric ulcer, and therefore the presence or absence of syphilis becomes a proper subject for investigation in all cases of ulcer of the stomach, particularly in those resisting ordinary treatment.

CORRESPONDENCE.

A WORD FOR SURGERY OF THE PAST.

To the Editor of The Medical and Surgical Reporter:

In your journal of the 4th of July, in Dr. Rickett's excellent article on Nephrectomy, page 10, vol. LXV, he refers to Pean as having first in modern surgery performed Splenectomy. With your permission I would draw his attention to letter LXV, article 10, of Morgani's great work, where he will find recorded a case of successful Splenectomy performed by "the very excellent Fontana," and reported by him in his medical and anatomical observations. The patient, a woman, survived the operation for

five years "and having conceived and brought forth in the mean time; least any one should doubt of the extraction of this viscus, no spleen was found in any part of the body on dissection; only cicatraces appeared in the neighbouring parts; to which it is wont naturally to adhere." By this post I send you a copy of the *Medical Press and Circular* which contains some articles of medieval surgery of the kidney and abdomen.

Yours truly,

GEORGE FOY.

7 Cavendish Row, Rutland Square, Dublin.

BOOK REVIEWS.

THE SURGICAL TREATMENT OF WOUNDS AND OBSTRUCTIONS OF THE INTESTINES. By EDWARD MARTIN, M. D., and H. A. HARE, M. D., Philadelphia: W. B. Saunders, 1891.

This work was awarded the "Fiske Fund Prize" for 1890, as being the best essay presented upon the subject of which it treats. It is composed of an introductory and twelve other chapters, besides tables of cases of cœliotomy for gun-shot wounds of the abdomen, and a summary of the tables of these injuries. The subjects considered include the following: Congenital malformations, intussusception, internal strangulation, valvulus, obstruction from foreign bodies, intestinal paralysis, and chronic obstruction. A chapter on peritonitis is added, for the reason that it is such a frequent complication of intestinal obstruction. The relative merits of the opium and the saline treatment of peritonitis are discussed and the indications for each method of medication is pointed out. The chapter on peritonitis is followed by others on diagnosis, general, special and surgical treatment of obstruction of the intestines, etc.

The chapter on wounds of the intestine is very complete. Much of the material for this essay, is based upon considerable experimental work done in the laboratory, references to which appear throughout the book.

Taken in its entirety, the volume is a thorough treatise upon the subjects considered; the conclusion reached by the authors in every case being based upon clinical and experimental studies rather than upon personal prejudice or preference—which so often mars and lessens the scientific value of a work,—essentially one of reference.

We consider the present work an important addition to medical literature, and one which will amply repay the reader for time spent in its perusal.

A MANUAL OF DISEASES OF THE NOSE AND THROAT INCLUDING THE NOSE, NASO-PHARYNX, PHARYNX AND LARYNX. By PROCTER S. HUTCHINSON, M. R. C. S., London. P. Blakiston, Son & Co., Philadelphia, 1891.

This brochure, of nearly one hundred and thirty pages, amply fulfils the author's intention of supplying to the post-graduate student a concise and practical work upon this especial branch of medicine.

Hay fever, the author states is most prevalent in Europe during June and July, and in America during August and September. Nothing new is suggested in the treatment of this distressing complaint. The author advises, change of climate; when this is impossible, and the patient has to reside in the country during the hay season, a pair of spectacles with broad, closely fitting brims, and some form of nasal respirator should be worn. A veil sufficiently impervious to keep out the pollen is too hot for summer.

Locally, chromic acid (gr. 1–8, 1–16 to $\bar{3}$j water) is advised as a spray for the nose in some cases. Perchloride of mercury (1–3000) is also suggested; the author disapproves of the use of cocaine, as he thinks it is injurious if used over long periods. Nerve tonics are recommended, such as, quinine, nux vomica, and valerianate of zinc.

The book should certainly be considered as the *vade mecum* to the student of diseases of the nose and throat; and to all interested in acquiring a practical working knowledge of this branch of medicine, the work can be conscientiously recommended.

PERISCOPE.

THERAPEUTICS.

TREATMENT OF GALL-STONES.

According to Naunyn, *Centralblatt für klin. Medicin.*, about every tenth adult suffers from gall-stones. The disease is extremely chronic and painful. Latterly surgical interference has been resorted to, but there still remains much for the physician to do. It is necessary first to understand the mode of origin. Gall-stones are formed if the bile is laden with the ingredients that form them, and which are very insoluble, namely, cholesterin and billirubin-chalk.

The cause of the increase of this in the bile is disputed. One view states that the excretion of cholesterin and of chalk is too great —cholesterin because of anomalous metabolism, chalk because of two much chalk being in the food. The other view is that the bile has lost its power of dissolving these bodies. Cholesterin forms two per cent. of the solid ingredients of the bile, and this proportion is fairly constant, independent of disease or food, and also of the amount present in the blood. There is an increase, however, where there is catarrh of the bile passages. Chalk also is formed from the diseased mucous membrane, the amount otherwise being independent of the quantity taken with the food. Naunyn holds that it is untenable to look for the formation of gall-stones in decomposition of the bile. Physiological considerations have afforded no help in accounting for the formation of gall-stones. The frequency of the occurrence can only be safely based upon post-mortem examination. The per centage found after death varies from five to twelve per cent. with different competent observers. The differences of these observations are probably due to the fact that the gall-stones are easily overlooked. From all statistics three very important deductions can be made: (1) Gall-stones are four and a half times more frequent in women than in men. (4) Before thirty they are infrequent (two to three per cent. Schrœder), after that age they become much more frequent—ten per cent. In old age their frequency becomes strikingly increased—twenty-five per cent. over sixty years of age. (3) Women that have borne children are most frequently affected of all. Thus Schrœder found that among women with gall-stones ninety per cent. had borne children. It must therefore be concluded that the most distinct cause is the stagnation of the bile in its passages. In women this is favored by clothing and pregnancy, both of which retard those movements of the diaphragm that assist in the expulsion of the bile. The frequency of gall-stones in old age is due to retardation of the bile flow, through atrophy of the smooth muscles in the bile passages (Charcot). The stagnation produces disease of the mucous membranes of the passages, and the cholesterin and bilirubin-chalk arise in consequence of destruction of the epithelium. At first an amorphous deposit is formed, which by absorption of the fluid becomes granular. These granules increase by deposition of bilirubin-chalk, and the infiltration of cholesterin. The latter supplanting the bilirubin-chalk forms ultimately the beautiful pure white cholesterin-solitaire. A further secondary formation occurs in the deposition of carbonate of lime, of importance because the stone is then no longer soluble. The cause of the stone forming desquamative angio-cholitis is the retarded discharge of the bile, through which an infection of the bile passage is favored. It is also possible that the bacillus growth in the bile favors the formation of gall-stones. Probably it is in this manner that the intrahepatic stones are formed. In regard to symptoms there should be distinguished a regular form and an irregular form of the disease. The former occurs when there is simply lodgment of the calculus in the gall-bladder or passage of the stone along the duct. The irregular form is seen when there is infectious angio-cholitis with abscesses in the liver, fistula, and all other consequences. As a final issue of the regular gall-stone disease may be the formation of carcinoma in the biliary passages and the liver. In regard to the symptoms, it should be remembered that the stone is most often lodged in the cystic duct, giving rise to colic, and less often in the common bile duct; therefore the occurrence of jaundice is not so common. Further, it should be borne in mind the ease with which infection can arise, giving rise to biliary fever. The connection between gall-stone and food is not proven, so that it is not possible to recommend a prophylactic diet. For the removal of gall-stones, cholagogues are not to be depended on. After an abundant varied diet the bile flows more freely than after cholagogues. In practice, errors of diet should be avoided, and alkaline saline waters (particularly the hot Karlsbad) act beneficially. These act by increasing the peristaltic activity of the digestive tract, and increasing the flow of blood to the abdominal organs. In the peristalsis the bile passages participate, and the movement of the bowels act as a form of massage, while the diseased mucous membrane benefits by the increased flow of blood. The injection into the rectum of large quantities of hot water serves the same purpose.

. Fürbinger based his remarks on 64 cases he had carefully observed, so that there was no doubt of the diagnoses. Of these, 13 were men and 51 women. The chief site of pain did not lie in most of the cases in the right hypochondrium, but in the epigastrium, radiating from thence upwards and downwards. With jaundice there was enlargement of the liver, and the dilated gall-

bladder was not infrequently to be felt. In 24 out of 41 there was slight fever; considable slowing of the pulse can accompany the fever. In 30 out of 41 there was jaundice. Duration of attack showed a variation from transient to several days' duration, with intervals of weeks and years. The *corpus delicti* should always be looked for, and its absence does not vitiate the diagnosis. Very seldom was the stone perceived through a peculiar grating noise in the gall bladder. When there is fever, it is irregular and accompanied by other symptoms pointing to the liver. When protracted for weeks and months the victim declines with severe cachexia (liver phthisis). The local pain may not be excessive till there is inflammation and ulceration of the peritoneum, on account of the latency of the catarrh of the gall bladder and biliary passages. In suppurative inflammation of the liver, pain in the right hypochondrium and jaundice are frequently wanting. When perforation takes place into the peritoneal cavity a fatal peritonitis is set up by the decomposed bile. When a fistula is formed it is often very distant, and daily discharges quantities of bile and rarely gall-stones. Most frequently the perforation takes place into the small intestine. The gall-stone can here cause grave mischief (ileus, perityphlitis, etc). Finally there may be set up interstitial hepatitis (too frequently doubted) as well as adhesions between the liver and neighboring organs. The latter may be a source of great discomfort. In regard to the diagnosis, gall-stone disease was often mistaken for gastric ulcer, cramp of the bowel and stomach, renal colic, and hepatic neuralgia. Further, the pain may lie in any region of the abdomen save that of the liver. Slight jaundice is not easy to recognize, but is valuable when it does occur. Surgical interference should not be delayed too long in order to aid the diagnosis. The puncture of the gall bladder is dangerous. Care should be taken not to confuse the intermittent fever with malaria or typhus. In regard to prognosis of the attack it is favorable, but of the after condition rather grave, although the surgical methods have improved it. It is consoling to know that serious cases can obtain ultimate recovery by internal treatment. Of Fürbinger's cases thirty-four per cent. were cured, forty-two per cent. were improved, ten per cent. were unsuccessful, and fourteen per cent. died. Of the six treated by surgical means four recovered. In regard to treatment, it is necessary to prevent the formation, to remove the concrements, and to combat the tendency to the formation of gall-stones. Morphia and opium are the best agents for subduing the attacks of colic. It is folly to try to dissolve the stone. The endeavor must be made to increase the mechanical driving force of the bile and swell out the stone. Health resorts and springs have much success and not a few failures. The salicylate of soda and the oil cure has been useful in Fürbinger's hands. With the latter the liver becomes permeated with fat, and a saponified fat is formed which can be found in the stools as pseudo-gall-stone. While this treatment can often be borne, it sometimes gives rise to distressing dyspepsia. In regard to diet, more depends on temperance than on the choice or denial of certain foods. There is no value in theoretic or empiric reasoning, and there should only be excluded excessive fatty and sugary foods, alcohol of bad quality, and notoriously indigestible matters. Of high value are warm baths, rational clothing, dwelling in fresh air, and avoidance of over exertion. Fürbinger cannot praise the attempts to express the stone by kneading the gall bladder and pressing the liver. Notwithstanding the brilliant results of surgical practice, he thinks that the operative procedure should not be lightly undertaken. Still when all other means fail, and the patient is threatened with cholæmia and pyæmia, then he would advise surgical interference. The operative removal of cicatricial bands is often valuable.

Reidel gave his experience of thirty-two cases. Sixteen of these had not jaundice, on whom he operated. All recovered, and no fistula was left behind. Sixteen had jaundice and the result was not so satisfactory. Ten completely recovered, two were under treatment, and four died. Of these four, one died after complete extirpation of the gall-bladder, two were in an exhausted condition when they came under treatment, and one died in consequence of escape of bile into the peritoneal cavity.

ON THE LOCAL TREATMENT OF STRANGULATED HERNIA BY ETHER.

Dr. Finkelstein gave in 1882, from his own practice, 63 cases of strangulated hernia. Of these, five yielded to taxis. In 58 he employed "local etherization," taxis having failed, and of these 58 cases 54 proved successful. Of the four unsuccessful cases two underwent surgical operations and two died refusing operative treatment. Since then he has had numerous successful cases re-

ported from others and six in his own practice. (*Berlin Klin. Woch.*) As he remarks himself, the number of cases is sufficiently great, and the successful results speak plainly enough to give his method a status in the practice of medicine—or, at all events, a more extended trial.

The method is simplicity itself. The patient is placed on his back, with the hips slightly raised and legs flexed, and then every ten minutes or a quarter of an hour a table-spoonful of sulphuric ether is poured on the hernia-ring and tumor. The application of ether is carried on for, as a rule, from three-quarters to three hours (or even four hours) until the tense tumor relaxes and lessens a little. As soon as this occurs, and if the strangulated bowel does not reduce itself, several slight efforts are made to reduce it, and almost "always" it slips with a gurgle and amazing ease into the belly cavity.

If the omentum alone be strangulated, the ether method is absolutely useless. As the ether causes an after feeling of heat and burning on the penis, labia, etc., Dr. Koch (America) protects these and other sensitive parts by previously smearing them with olive oil, and in addition covering them with pledgets of cotton wadding.

The ether seems to act thus. Richter, Velpean, and others, hold that strangulation may in some cases be caused by spasm of the abdominal orifice. In these cases the ether may act by relaxing the spasm and thus reducing the bowel movable. That may be so, our author remarks, but he himself lays most stress on the property ether has of producing intense cold by rapid evaporation. The intense cold condenses the gas in the bowel, and by so doing diminishes its calibre. Possibly, also, the cold stimulates the peripheric nerves in the bowel sheath, and excites it to natural peristaltic action, which is more likely to empty it of gas, fluid and semifluid contents than the rude manipulations in taxis.

Hence it follows the less the vitality of the bowel is impaired by taxis, the more successful will be the etherization process. The method certainly deserves a trial.

MEDICINE.

RESPIRATION AND THE CARDIAC IMPULSE.

It is a well known fact, which is stated in all text-books, that the cardiac impulse changes its position with expiration and inspiration. By most authors this is considered to be due to the movement of the diaphragm. Eichhorst says, in his text-book of clinical examination, that if by any means the movement of the diaphragm is paralyzed, the changes in position of the heart's apex no longer occur. Riegel and Tuczek observed some cases in which during inspiration the apex beat became stronger and more perceptible, whilst the reverse took place with expiration. After death, adhesions were found between the pleuro and pericardium. Eichhorst has also recorded a case in which the same symptoms were noticed when a diffused bronchial catarrh was present, being especially severe in the anterior and lower part of the left lung. In accordance with the theory generally accepted, these phenomena are difficult to explain, but Dr. P. E. Livierato brings forward some observations which seem to show that the explanation of the variations in the position of the cardiac impulse with respiration is not, after all, the correct one. After describing the apparatus employed in his investigations, he gives the following conclusions at which he has arrived: (1) The heart may undergo under normal circumstances, considerable changes in its position, which are due to extraordinary movements of the lungs in respiration; (2) in ordinary respiration these changes are not appreciable; (3) the alterations in position of the heart are brought about chiefly by the increase in size of the lungs with inspiration, especially the left; (4) the influence of the diaphragm is only secondary; (5) the same changes of position of the heart can be produced in the dead body by artificial respiration when the diaphragm has no action; (6) in forced inspiration the heart moves to the right, downwards, and forwards; (7) the greatest changes are noticed when the subject is in a sitting position; (8) the movement of the heart to the right is more marked when the expansion of the right lung is prevented by some pathological condition; (9) the movement towards the right is always the one most easily observed, next the downward, the anterior movement being the least; (10) Dr. Livierato claims that such cases as were quoted above—namely, those of Riegel, Tuczek, and Eichhorst, add additional support to his theory; for in these cases the forward movement becomes very marked, since, owing either to the pleuro-pericardial adhesions or to the infiltration of the lower part of the lung, when a deep inspiration is taken the lung tends to push the heart apex more to the

front, and consequently accentuate the anterior movement. It is to be concluded from this that this phenomenon is not diagnostic of pleuro-pericardial adhesions as Riegel and Tuczek maintained.—*Lancet.*

COMPLICATIONS IN TWO THOUSAND FATAL CASES OF TYPHOID FEVER.

Holscher (*Munchener Med. Wochenschrift*, January, 1891,) reports 2,000 deaths from typhoid fever in which post mortems were held. Twenty-four per cent., or 480 cases, died from the immediate effects of the typhoid poison. Twenty-four cases are reported as sudden deaths, the cause of death in the majority of these being degeneration of the heart muscle. Tracheotomy was performed in fifteen cases, usually for perichondritis of larynx. Pregnancy is considered a serious complication. Out of 800 women in the series twenty-seven were pregnant. Five cases of "walking" typhoid are reported; two of these died from an error in diet, two of degeneration of the heart, and one of high grade anemia.

Relapse took place in 103 cases. This number—five per cent. of all the cases—is above the average usually given, but the author considers eight per cent. of fatal cases to have suffered relapse.

The proportion of males to females was as three to two; the average age was 27½ years. Of the males, one was over 75 years, and one a nursing infant. Of the females, one was 72 years, one 9 months.

Death took place in the third and fourth week in fifty per cent. of the cases; twenty-five per cent. occurred in the second and fifth weeks; two-and-a-half per cent. in the first week. Over fifty per cent. of those who died in the first week were free from complications.

The causes of death which reached five per cent. or over were the following: Edema of the lungs, fifteen per cent.; parenchymatous and fatty degeneration of the heart, thirteen per cent.; parenchymatous and fatty degeneration of the liver, ten per cent.; bronchitis, ten per cent,; lobular pneumonia, eight per cent.; croupous pneumonia, seven per cent.; hæmorrhagic lung infarct, six per cent.; perforation of the intestine, with peritonitis, six per cent.; intestinal hæmorrhage and edema of the brain, each five per cent. —*Univ. Med. Mag.*

HEMIOPIA, HEMIANOPIA, HEMIANOPSIA.

The correct use of these words is not well understood and much confusion often results. *Hemiopia* is an old word and signifies literally "half vision," and has always been used to designate that condition in which a person sees only one-half of objects. *Hemianopia* and *Hemianopsia* are synonimous and are new words, recently introduced for the purpose of more correctly expressing the visual changes that follow certain pathological conditions of the brain and signify absence of vision (blindness), in one-half of the field. The little particle, *an*, gives both words a negative signfication, the opposite of vision, blindness. These words are not found in the medical dictionaries, having only recently come into use. They are good words and are much to be preferred to hemiopia, since it is much more important to use a word that will express the absence of the function of vision in certain parts of the field of vision, rather than its presence in certain other parts, not designated, are blind. To illustrate: When I say there is "left lateral hemianopia or hemianopsia," I mean to say (and these words express my meaning exactly), that the left half of the field of vision is blind (absence of vision in that part of the field). If I use the old word, and say there is "left lateral hemiopia," I mean that the vision is still present in the left half of the field of vision, leaving it to be inferred that the right half of the field is blind. It must always be understood that the part of the retina involved is the opposite part to that of the field designated.

This subject is the more important because it plays such an important part in most cases of cerebral localization.—*St. Louis Med. and Surg. Jour.*

THE ÆTIOLOGY OF CHEYNE-STOKES RESPIRATION.

At a meeting of the Section in Medicine of the Royal Academy of Medicine in Ireland, held on May 22d, Dr. M. A. Boyd read a paper in which he reviewed all the physiological explanations of this phenomenon offered by writers on the subject since Stoke's time to the present day. He particularly pointed out the very rational explanations offered by Traube and Filehene, who regarded the respiratory derangement from the altered nutrition of the respiratory-center point of view; and of those of the Dublin school, including Hayden and Little, who regarded it primarily from the cardiac point of view, and complimented the Dublin School as offering by far the best evidence, both clinically and

pathologically, in explanation of the phenomenon. Dr. Boyd, having alluded to the marked rythmical irregularities between the heart pulse and respirations in this affection, drew attention to a point which heretofore in the literature of the subject, so far as he was aware, had not been alluded to—namely, that the latter portion of the forced respiratory phase of the Cheyne-Stokes cycle was chiefly an expiratory one, in contrast to the first portion of it, which was an inspiratory one; and that this forced expiration had a most important bearing on the weak ventricles of the heart, by helping them to squeeze the blood, on the one side into the pulmonary artery, and on the other into the dilated and inelastic aorta. In proof of this, he exhibited sphygmographic tracings showing that it was only during this expiratory portion of the respiration that arterial tension was raised in the arteries, and that this tension continued through the apnœal period following, during which time the respiratory center was fully supplied with arterial blood and the weak and degenerated left ventricle resting. He regarded the apnœal period, during which time respiration was suspended, as only an effort on the part of the higher automatic centers to rest a heart the ventricle of which was too feeble to charge an arterial system the aorta of which might be dilated and inelastic, or the vaso-motor control of which might be defective, and whose own blood supply might be rendered insufficient in consequence, and its nutrition enfeebled. After the intrinsic muscle of the heart had been fed by this increased arterial tension of the expiratory and apnœal periods, forced inspirations began again, and the heart contractions were stronger, but they failed to fill the dilated aorta until the forced expirations, by making pressure on the ventricles, came to their aid again.

The most typical and pronounced forms of Cheyne-Stokes respiration were to be met with in alterations of the heart and aorta produced by degeneration and disease. The forms of it met with in cerebral disease, or injury, and in apoplexy and uræmic coma, without any primary engagement of the heart, he regarded as due to direct interference with the respiratory center in the medulla, either by pressure or by poisoned blood, and the phases of it were never so well marked as in those cases of the affection depending primarily on alterations in the heart.

Owing to its dual origin in this way came the differences of opinion as regarded its pathology. As regarded its treatment, Dr. Boyd found so much improvement following the inhalation of oxygen in all the cases where disease or degeneration of the heart produced it, that he urged a trial of this remedy in all such cases, and ventured to suggest, from his experience of the remedy, that it should be tried not alone in this affection but in all cases where degeneration of the heart existed from any other cause.—*N. Y. Med. Jour.*

SURGERY.

THE OPERATIVE TREATMENT OF SQUINT.

The careful investigations by numerous observers, beginning with Donders, of the conditions which give rise to non-paralytic strabismus, have, as might naturally have been anticipated, led to considerable modifications in the treatment of this deformity. The very noticeable result of the increased knowledge of the pathogenesis of squint has been a great diminution in the number of cases subjected to operation. Not very many years ago cases of squint in children were treated by tenotomy with little or no attempt to correct the ametropia almost constantly present. The results of these indiscriminate tenotomies were often disastrous; the deformity for which the operation was undertaken being followed by one even more noticeable. It was for the correction of this latter condition that the operation of advancement or readjustment of the recti muscles of the eye was introduced. In recent years, however, this procedure, in one of its numerous modifications, has come into use as the primary operation in the treatment of many cases of strabismus and, as indicated by a recent discussion at the Ophthalmological Society, finds favor with many surgeons. The greater confidence with which a definite result can be foretold, and the much greater effect which can be produced by this method of operating than by simple tenotomy, seem good reasons for advocating its adoption in high degrees of squint, especially in those cases, probably a large majority of the total number, in which the deviating eye is amblyopic.—*Brit. Med. Jour.*

THE RADICAL CURE OF LARYNGEAL PHTHISIS BY ENDOLARYNGEAL SURGICAL TREATMENT.

A number of interesting cases are narrated by Dr. Th. Heryng, and the following indications for the use of the curette are enumerated:

1. In limited infiltrations or ulcerations of the posterior wall of the larynx and in recent unilateral infiltrations of the epiglottis, which are sometimes the beginning of laryngeal phthisis. Here the double curette of Krause is indicated.

2. In the infiltrations and deep ulcerations of the ventricular bands where one may use the author's curette, or the instrument of Krause or Landgraf.

3. In the hypertrophic ulcerations covered with granulations which spring from the surface or the borders of the vocal bands and sometimes induce dangerous stenosis; for a similar reason in polypoid formations, in tubercular tumors, etc.—*Annales des mal. de l'oreille, du larynx,* etc.—*Epitome.*

MEDICATED INTRAOCULAR INJECTIONS.

M. Abadie injected 1 drop doses of a 1:1000 sublimate solution into an eye affected with rebellious syphilis with most gratifying results. We know how helpless we are in cases of hæmorrhagic glaucoma in which neither sclerotomy nor iridectomy give relief, and where the pain is so intense as to threaten the necessity of enucleation. M. Abadie has succeeded several times in calming the pain and saving the eye by injecting a drop of ergotine into the vitreous. He also obtained good results from the injection of the same remedy in an eye affected by hydrophthalmia, in which there was evidence of intraocular hæmorrhage. He mentions the favorable results obtained from sublimate injections in certain cases of septic infection of the cornea, and in severe forms of macular retino-choroiditis. He thinks the intraocular injections should be followed for some time with subcutaneous ocular injections of sublimate with a view of preventing recurrence of the trouble. M. Darier employs subconjunctival sublimate injections in various ocular troubles supposed to be infectious. Grave forms of specific iritis and cases of the gumma of the iris recover much more quickly with this method than under the usual treatment. This is also true of corneal affections of similar origin, as well as certain acute forms of iritis, in which it is impossible to be certain of the specific nature. Subconjunctival injections are indicated in all cases where it is necessary to reach the trouble in the shortest possible time. No other plan of medication gives such prompt result. A perfectly aseptic solution and syringe must be used. A dose of $\frac{1}{20}$ milligramme at each injection every three days should be given four or five times. It is well to combine the subconjunctival injections with subcutaneous treatment when mercury is indicated. De Wecker opposes the practice of injecting into the vitreous. In a severe case of syphilitic retino-choroiditis one drop of 1:1000 of sublimate solution resulted very unfavorably. —*Union Médical.*

OPERATIVE TREATMENT OF PERITONITIS.

Dr. J. F. W. Ross (*Canada Lancet*) concludes:

(1) That in typhoid-perforation, operation is useless.

(2) That in traumatic general peritonitis, and in all cases of general peritonitis, the abdomen should be opened, washed out and drained, and the cause of the peritonitis found and removed.

(3) That in cases of localized peritonitis, and in obscure cases of injury not followed by general peritonitis, it is better to follow an expectant plan of treatment, unless abscess formation can be made out.

(4) That in all cases of abscess formation, opening and draining will give the most rapid convalescence, and will prevent unfavorable rupture into other parts.

(5) That in view of the complications that may be found after opening the abdomen, the best interests of the patient will be consulted by having the operation done by some one accustomed to do abdominal surgery.

EXCISION OF THE SCAPULA.

At a meeting of the Medico-Chirurgical Society of Bologna on April 19th, the President, Professor Putti (*Riforma Medica,* May 1st, 1891) related two cases in which he had completely extirpated the scapula, leaving the other elements of the shoulder and the arm intact. In both cases the greater part of the muscles covering the bone and portions of those attached to it were removed at the same time. In one of the cases (a man, aged 45, with osteosarcoma of the scapula) the operation had been performed two years previously, the patient dying fourteen months after it of acute enterocolitis; the other (a woman with a myxomatous osteochondrosarcoma of the scapula, who was shown to the Society) had been operated on recently. In both cases, after removal of the bone, an attempt had been made to form a new joint by placing the articular head of the humerus under the acromial end of the clavicle, and suturing the remains of the capsule to the portions of the excised muscles which were

left behind. The deltoid was made to cover the new joint as closely as possible, and fixed in position with sutures. The new joint proved a success in each case, there being a fair amount of mobility and considerable muscular power. The man, indeed, had been able to resume the lighter part of his work as a farm laborer. Professor Putti pointed out that the published statistics of excision of the scapula were for the most part misleading, inasmuch as they included cases of resection of larger or smaller portions of the bone as well as cases of complete removal.—*Brit. Med. Jour.*

PALLIATIVE OPERATIONS IN CASES OF ENLARGED PROSTATE.

Vignard (*Annal des Malad. des Org. Génito-urinê.*, vol. x, 1891; *Centralbl.f. Chir.*, No. 10, 1891) believes that in the very great majority of cases of hypertrophy of the prostate, bloodless therapeutic measures are sufficient. He would recommend surgical intervention—that is, puncture of the bladder or supra-pubic cystotomy, or the boutonniére operation—only in cases of retention where catheterization is impossible, and where septic urine absolutely requires evacuation; in cases where great difficulty in passing the catheter is not relieved by permanent catheterization; and in cases of cystitis not relieved by careful and long-continued medication. In the first two instances the boutonniére operation is indicated, whilst where cystitis is present supra-pubic cystotomy should be practised.—*Amer. Jour. Med. Sci.*

GYNÆCOLOGY.

JAUNDICE IN CHILDBED.

M. Labusquière (*Revue. Obstét. et Gynéc.*, February, 1891) attended in December the confinement of a married woman of emotional temperament. The catamenia were always painful, and associated at their commencement with sharp hypogastric pains and marked anæmia. Attacks of urticaria were frequent. She burst into tears on one occasion because the doctor called and saw her before she had time to adorn herself like a fashionable convalescent. Labor was lingering, and the forceps were applied under chloroform. She manifested extreme alarm when informed that the use of instruments and chloroform was necessary. The child was saved. On the second day the patient was observed to be jaundiced. There was no pain in the hepatic region, but the gall-bladder was very tender on pressure. The milk, as well as the urine, contained biliary pigments. The jaundice subsided within a few days; as it disappeared the patient was troubled with severe itching of the skin and a mild attack of urticaria. The patient made a good recovery, and was able, after the cessation of jaundice, to suckle her child. M. Labusquiére refers to the icterus of menstruation noted by Senator and others. Pilliet has recently written on the liver in eclamptic cases, and jaundice occurring in puerperal eclampsia is an extremely grave symptom. In M. Labusquiére's case the jaundice was simple. The lingering labor might have involved much disturbance of the circulation of the liver. The chloroform might have played some part in causing the complication, though not quite two ounces were used for a long forceps delivery. It appears most probable, however, in M. Labusquiére's opinion, that mental agitation was the cause of the jaundice. Emotion may set up vasomotor disturbance in the liver and consequent excessive secretion of bile. On the other hand, it may act, as Potain believes, by causing spasm of the muscular elements of the bile ducts. The patient had been a spoilt child, and her health was permanently enfeebled by severe attacks of several febrile disorders in infancy.—*Brit. Med. Jour.*

TREATMENT OF PUERPERAL ECLAMPSIA.

Lohlein has collected 325 cases of eclampsia observed in 52,325 puerperal women; *i. e.*, 1 case in 161 labors. The mortality was 19 per 100, and has not been reduced in later years. In a few cases Lohlein performed Cæsarean section, which offers the last chance of saving the life of the mother, although the convulsions do not always cease after extraction of the fœtus. It also affords sufficient hope to warrant recourse to it when the life of the fœtus is endangered. Véit advises morphine in large doses, which gives fairly good results, reducing the mortality to 13.8 per 100. Chrobak prefers chloroform to morphine. Schmorl announces the existence of hæmorrhagic foci either about the portal veins or about the capillaries. The walls of the vessels are frequently ruptured. Emboli are produced by special cells which originate, according to Klebs, in the liver, and according to Schmorl, in the placenta.—*Union Médicale*, June 2, 1891.

OBSTETRICS.

TREATMENT OF PLACENTA PRAEVIA.

Wyder (address at the thirty-ninth meeting of the "Aerztliche Centralverin" in Zurich) rejects the method much in use by practitioners, of tamponade of the vagina with following internal version and extraction of the child, and recommends in its place the method of Braxton Hicks, which has been for a few years in vogue at the principal German clinics, under the lead of Schröder and Gusserow.

The principal disadvantages of the former method Wyder sets forth as:

1. Hæmorrhage from the patulent uterine sinus is not certainly checked by the tamponade. Moreover, in case the waters have broken away, this procedure is absolutely contra-indicated on account of possible internal hæmorrhage.

2. In the manipulations of this method there is always great danger of infection which even the most rigid observance of antiseptic precautions cannot always prevent.

3. In the effort to extract the child immediately after version injuries are often inflicted upon the lower uterine segment.

4. A farther difficulty is encountered in the profuse hæmorrhage of the third stage of labor, and the manual extraction of the placenta with its attending results, rendered necessary by the bleeding.

5. An additional disadvantage of the tamponade is the enormous loss of time to the busy practitioner unavoidable on account of the extremely close attention necessary throughout the whole procedure.

Braxton Hicks' method overcomes all these disadvantages in that at the same time the farther separation of the placenta is hindered by the early discharge of the water; the hæmorrhage attendant upon the manœuvre is completely checked by the natural tamponade,—the breech of the child filling the whole pelvis and in an aseptic fashion.

In Schröder's words the procedure is "rupture the membranes and pull down the foot." Where the case is one of breech presentation this is very simple, but where we have a head or cross presentation it is necessary to turn for the sake of bringing down the foot and should the cervix be undilated, version must be accomplished by Braxton Hicks' method.

After turning and pulling down the foot, the expulsion of the child must be left as far as possible to natural forces. Only immediately impending danger to mother or child affords indication for extraction. Digital separation of the placenta must also be avoided as far as possible.

For carrying out the version in case the mouth of the womb be fully occupied by the placenta, Wyder recommends thrusting the finger through the placentar tissue while with the other hand the presenting part is pressed against the finger. The hæmorrhage following the injury to the placenta—though it comes principally from the placental circulation of the child—is insignificant. The principal objection made hitherto to this method is the great mortality to the child. Wyder justly offsets this by the relatively greater mortality to the mother under the older procedure. By the latter the mortality of mothers was 30–40 per cent. while by combined version in Schröder's and Gusserow's clinics it was 6–7 per cent.

The mortality of children under the older method amounted to 50–70 per cent. and of those who were born alive 30–40 per cent. perished from inanition. The statistics of the clinics mentioned show for the other method a mortality of 70–80 per cent. of the children.—*Therapeutic Monatshefte.*

FIVE CASES OF ECTOPIC PREGNANCY.

Foerster (*Med. Monatsschrift,* November, 1890) remarks that, notwithstanding the many contributions to this subject in recent times, there are still many things regarding it that are obscure. Especially is this true in regard to its ætiology. Even those who have had most experience with this condition are still in the dark in regard to important particulars. There are many cases that are so complicated by peritoneal adhesions that they present the greatest difficulties or are quite unsuitable for operation. The author agrees with those who believe that prior to rupture this condition is almost impossible of diagnosis. His experience includes five cases which have been seen within the past two years. Four of the patients were operated upon—two with a successful and two with a fatal result. The fifth patient died of hæmorrhage, no operation having been attempted. The pains, which resemble labor pains in these cases, are regarded as an important factor in establishing the diagnosis. The atypical hæmorrhages from the uterus should also excite suspicion of this condition, as has been observed by many authors. Other important diagnostic factors are the enlargement

of the uterus, its mobility, the sense of its emptiness when the sound is passed, and the activity of the mammary glands; also the anæmic condition of the patient, which is usually present. As to the operation in such cases, it should be performed as rapidly as possible, and it is doubtless well to leave a large quantity of hot water in the abdominal cavity to be absorbed, and thus take the place of the blood which has been lost.

PÆDIATRICS.

IRRIGATION OF THE STOMACH OF SMALL CHILDREN FOR THERAPEUTIC PURPOSES.

The following are the conclusions of Troitzky (*Arch. f. Kinderh.*, Bd. xii. 5, 6):

1. Irrigation of the stomach is a valuable agent for the treatment of beginning disorders of the stomach and intestines, if used at the proper time. It may prevent their transformation into severe or dangerous conditions. The favorable results to be obtained are the more evident the earlier in the history of the disease this treatment is undertaken.

2. The most favorable cases for cure by this means of treatment alone are the dyspepsias which are unattended by fever, the gastric form will yield most readily, the mixed gastric and intestinal form less readily, and the intestinal form least readily. The chronic forms of dyspepsia yield to this treatment less readily than the acute, and the different varieties yield in the same order as mentioned for the acute forms.

3. Irrigation is also useful for the quickly-developing disorders of the stomach and bowels, for example, the specific form of diarrhœa. But it should be used in conjunction with other therapeutic means.

4. The subacute and chronic disorders of the stomach and bowels may gradually be overcome if, with the irrigation of the stomach and the internal medication, careful efforts are observed to strengthen the system at large.—*Archives Pœdiatrics.*

ANTIPYRETICS IN INFANTILE THERAPEUTICS.

Investigations by Demme (*La Cronica Med.*) were made at the hospital at Bern. From these it was deduced that in temperatures from 38.5° C. to 39.5° C. of brief duration there is no indication for the use of antipyretics. For such conditions cold packs are preferable, and if there is insomnia and restlessness, baths at 25° C. to 28° C. for five or ten minutes should be given twice daily. The elevated temperatures are those which call for particular attention, though one must also take into consideration their cause, and the resisting power of the patient. In typhoid fever, acute rheumatism, and broncho-pneumonia they fill an important indication, but not in diphtheria, the exanthemata, or fibrinous pneumonia. It is not advisable to combine the use of antipyretics and cold baths; with the former warm baths should be used. In cases in which there is cyanosis the warm bath may be used and cold affusions to the head and nucha. If the digestive tract is tolerant, one may use salicylate of soda internally, but salol should be used if there is a tendency to vomiting and diarrhœa. Of the former, half a gramme to a gramme may be given to children two to four years of age, one to two grammes to those of five to ten years, two to three grammes from eleven to fifteen years. Of salol, twenty-five to thirty centigrammes may be given three times daily to children of two to four years, fifty to seventy-five centigrammes three or four times daily to those of five to ten years, seventy-five to one hundred centrigrammes three to four times daily to those of eleven to fifteen years. Thalline has been used by the author with good results, but it will sometimes produce collapse. In broncho-pneumonia the use of antipyrin in an aromatic solution with a small quantity of alcohol is recommended, provided it does not produce digestive disturbance. The dosage is twenty to forty centigrammes every hour for the ages two to four, fifty to seventy-five centigrammes from five to ten, seventy-five to one hundred centigrammes from eleven to fifteen. Should hectic fever supervene in the course of a broncho-pneumonia, quinine should be substitued for antipyrin.—*Archives Pœdiatrics.*

THE USE OF PURE BENZOLE IN WHOOPING COUGH.

Dr. W. Robertson, writes in the *Lancet* that after some years' experience of the use of benzole in whooping-cough he can safely say that it effects better results than all the other remedies recognized as useful in this affection. In the adult and child it is of equal benefit. In an infant just now under treatment the attacks have been reduced from twenty or thirty in the night to two or three, and whereas when the treatment was

begun evidences of bronchitis were present, now the chest is clear and the child able to be taken out of doors daily. All this improvement was brought about in less than ten days. He has administered benzole in whooping cough, where convulsions and other complications were fast reducing all chances of recovery, with perfect success in a few days. In adults, where pertussis assumes often serious aspects, benzole has proved equally efficacious. Two minims in mucilage are sufficient for a child six months old, and five minims in mucilage on sugar or in capsule for adults. Whenever the benzole odor is observed in the breath of the patient, then all anxiety as to the result may be allayed.

HYGIENE.

CARBOLIC ACID, CREOLIN AND LYSOL.

From *Revue D'Hygiene* we extract the following notes on the work of Drs. Remonchemps and Sugg, relative to the comparative disinfecting values of carbolic acid, creolin and lysol. The last is a comparatively new addition to the list of disinfectants. The result of various studies of creolin were given in the Fifth Annual Report.

The authors used the bacilli and spores of anthrax, of typhoid fever, and of cholera in their provings. On the free spores the agents all act slowly; creolin and lysol act a little more promptly than carbolic acid on cultures in bouillon, but the difference would not amount to much in practice. There is, however, an important element of safety, due to the difference in the poisonous properties of these agents. While it took only 0.30 gramme of carbolic acid to kill a given weight of rabbit, it required 1.10 of creolin or 2.30 of lysol.

One interesting point brought out is that spots on clothing soiled with fœcal discharges of typhoid fever and cholera patients may be completely sterilized in two hours in a one per cent. solution of any one of these agents cold, but if warmed to 122° F. the sterilization is complete in thirty minutes.

With lysol, disinfection of the hands and instruments was accomplished with a five per cent. solution in five seconds, especially when warm; with a two and one-half per cent. solution, ulcers and cavities were disinfected in five minutes.

Lysol is a thick, light brown liquid with a specific gravity of 1.042. It is perfectly soluble in water, and forms a clear solution in contradistinction to creolin which forms a milky opaque emulsion. In washing in a solution of lysol it forms a lather, and thus, while exerting the action of a disinfectant, it plays the part of a soap. It, therefore, has the advantage of easily and rapidly permeating tissues with which it is brought into contact.—*Sanitary Inspector.*

STERILITY OF FAT PEOPLE.

Obesity is an obstacle to fecundation in all animals; and this law obtains also in the vegetable kingdom. Hippocrates enrolled this among his aphorisms. As proof, he cited the frequent sterility of the Scythian women, often fat, in comparison with the remarkable fecundity of their slaves, who become pregnant upon the least provocation.

Without seeking for demonstrative instances in Eastern countries, M. H. Kisch (*Le Bull. Med.*) has ascertained that while sterility exists on an average in one household in ten, or at least in more than one in eight—six among the aristocracy—this proportion is increased to one in five when the wife or both parties are fat; if we reckon families which have only one child, in such cases there will be found a proportion of one to four.

It is useless to insist that mechanical obstacles, in consequence of obesity on the part of one or the other, and especially on the part of both, to sexual congress are the cause. It should be observed that this condition is habitually accompanied by a decided frigidity. In addition, M. Kisch has observed that, though the virile power is preserved, the spermatic fluid is often destitute of spermatozoids (9 per cent.,) and even then they evince but little vitality.

With the woman, whose role in sterility is the most important, obesity is accompanied by a premature menopause; or if continued, the discharge is scant, void of color, and scarcely existent. Catarrhal affections of the vulva and of the uterus are frequent in such cases; and these concomitants are important in this regard.

It has been observed that when a regime, well advised and pursued, has resulted in removing, at least in part, the obesity, the genital sense revives, and with it the prolific aptitudes. On the other hand, if obesity is the occasion of sterility, it does not always entail deplorable consequences, and non-sterile women who are fat are no rarity.—*Weekly Medical Review.*

MEDICAL CHEMISTRY.

RAPID ESTIMATION OF NITRATES IN WATER.

In place of the present somewhat cumbersome methods in vogue for detecting the presence of, and estimating (approximately) the quantity of, nitrates in drinking water, George Harrow (in *Jour. Chem. Soc.*) proposes a new method, which is based upon Griess' color test for nitrous acid, the nitrate being for this purpose previously reduced by zinc dust. The author says:

The method which I have devised for this purpose is founded on Griess' extremely sensitive nitrite test (alpha-naphthylamine and sulphanilic acid), and depends on the conversion of nitric acid into nitrous acid by means of zinc dust; that this conversion is a partial one, and that other products—ammonia and hydroxylamine—are formed, does not affect the delicacy of the test or the accuracy of the determination.

The test solution used consists of

Alpha-Naphthylamine	1 Gm.
Sulphanilic Acid	1 Gm.
Ordinary strong Hydrochloric Acid	25 C.c.

dissolved in about 200 C.c. of distilled water, boiled with a small quantity of animal charcoal, filtered, and made up to 500 C.c.

There are also required standard solutions containing

1.0 part N as nitrates per 100,000
0.1 " " " " " "
0.01 " " " " " "

To prepare these solutions, 0.721 Gm. of pure and dry potassium nitrate is dissolved in 1 liter of water; the resulting solution contains 10 parts of N per 100,000, and may be readily diluted to the strength required. If many water analyses are to be made, it is as well to make up a quart of each of the standards.

A small quantity of zinc dust is also required, contained in a wide-mouthed bottle, into the cork of which a miniature spatula, constructed of brass or platinum foil, should be fixed.

The process is conducted as follows: Fifty C.c. of each water to be tested—and as many as four estimations may readily be conducted at the same time—are placed in beakers (100 C.c. contents) side by side on a sheet of white paper, and with them, in three smaller beakers, 50 C.c. of each of the standard nitrate solutions; to each beaker is now added 10 C.c. of the test solution, and afterwards a very small quantity of zinc dust (7 to 8 Mgm.) by means of the miniature spatula; the quantity added should be approximately the same in each case, and I find that there is no difficulty in effecting this. If nitrate be present in the waters a more or less intense pink color will make its appearance, and this color may be compared with that produced in the three standard nitrate solutions, after the lapse of fifteen minutes; a rough approximation to the truth is obtained in this first experiment.*

To get an accurate result the water must be diluted until the color produced is very nearly like that given by one of the standards; perhaps the greatest accuracy may be obtained with the most dilute standard, and, if it be used, a hundredfold dilution of the water to be tested is frequently advisable; the necessary dilution is, of course, indicated by the first experiment.

The diluted waters are again tested against standards 0.1 or 0.01, and, after fifteen minutes, the colors carefully compared in Nesslerizing cylinders of equal calibre, which may be conveniently graduated at the side. The standard solution occupying 60 C.c. in one cylinder, the water tested is run into the other until the depth of color appears to be equal; a reading is then made of the quantity necessary. Say 45 C.c. were employed: then 45 : 60 :: 0.1 : x (=0.133); and supposing the water to have been ten times diluted, it would contain 1.33 parts nitrogen as nitrates and nitrites.

The advantages of the process are its rapidity, simplicity, and ease of execution, and the small quantity of water required for analysis. Twenty C.c. are sufficient for the purpose, and enable one to make several determinations.

The only precaution necessary, so far as I have observed, is to avoid the addition of large quantities of zinc dust, which would decolorize the solution.—*Amer. Drug.*

*If *nitrites* are present the pink color will, of course, appear without the addition of zinc dust: Griess' test.

NEWS AND MISCELLANY.

THE HUDSON COUNTY, (N. J.,) MEDICAL SOCIETY.

Dr. Thomas H. Manley, of New York was the guest of the Hudson Co. (N. J.) Medical Society on the evening of October 6th and presented an essay entitled "The Etiology or Causation of Inguinal-Hernia, in the Male Sex."

ADVICE TO A YOUNG PHYSICIAN.

The following letter, written eighty years ago by Dr. Benjamin Rush, applies so well to present conditions and is so full of sound advice that we publish it here:

"PHILADELPHIA, April 21, 1812.

"DEAR SIR:—The facility with which a medical education is acquired in our country has multiplied physicians to such a degree that I do not know of a spot in the United States in which you would fix yourself with more advantage than in the one you now occupy. Competition and slow pay are now the conditions of a medical life everywhere. My advice to you is to remain where you are; you will grow with the growth of the settlement. Purchase upon credit, if possible, a small farm; a little debt will make you industrious and furnish you with an excuse to send in your bills as soon as your patients recover. Employ the leisure which a healthy season will give you in agricultural labors; the more you will obtain in this way the more independent you will be of your patients, and, of course, the more you will be courted by them. Happiness does not consist in wealth. A competence, books, alternate labor and ease, to use the words of the poet Thomson, a good wife, a few friends, vicinity to a church, and conduct regulated by the principles of the Gospel constitute the sum total of all the happiness this world is capable of giving, and these may all be possessed and enjoyed in your present situation.

"From, dear Doctor,

"Yours truly and affectionately,

"BENJ. RUSH.

"To DR. PETRIKEN."—*Med. Rec.*

THE CANCER GRAFTS.

"Full many a shaft at random sent," as the poet observes, "finds mark the archer little meant." This remark certainly finds application in the *ricochet* at Berlin of the scandal evoked at Paris by M. Cornil's communication on the grafting experiments. The most careful scrutiny by journalists in quest of provender has failed to fix the crime on any French surgeons, but the attention thus directed to the subject has had for effect to focus the bull's eye glare of public opinion on certain observations rendered by Drs. Hahn and von Berkmann, in the *Deutsche Medizinische Wochenschrift* as long ago as November, 1887. These gentlemen, indeed, gave the results of their experiments in this direction, these results coinciding with those chronicled by M. Cornill's anonymous correspondent. It will be seen, however, from our German correspondence that the whole affair is an old one revived for the dead season, and that the cancer bacillus—as mythical as the sea serpent—has been called into existence to fill a hiatus. It is, indeed, the fact, that years ago both Prof. Hahn and Prof. von Bergmann, in order to ascertain whether cancer could be transferred from one body to another, did persuade some patients who were hopelessly ill from the disease to allow them to try if cancer growing in one part of the body could be made to grow in another, and with the patients' free consent a small piece of cancerous tissue was removed from one breast and inserted into the flesh of the other, which was up to then free from disease, with the result that the transplanted piece "took root" and grew. Such experiments are, in our opinion, however, unjustifiable, as they are a direct violation of the Hippocratic canon that the art of medicine has but two legitimate objects, viz., the promulgation of human life, and the relief of human suffering, and it cannot be said that either was fulfilled in the case of the objects experimented on. Every professional man will regret that any explanatio on such a subject has been called for—a denial would have been infinitely more satisfactory. It is curious that the facts as related should not have excited criticism at the time. Their having been allowed to pass unchallenged looks as if professional indignation were but an echo, and a consequence of outside pressure. We know, of course, that in truth our ignorance is more to blame than our want of humanity. No English surgeon would even have dared to accuse himself publicly in any of our medical societies of such a gross breach of his duty to his patient, for without undue insular pride, we venture to assert he would thereby have irrevocably sealed his professional doom.—*Med. Press.*

THE LAW AS REGARDS TWINS.

When twins are born in France, the last born is considered by the law the eldest! Consequently, if both survive, and, in case of boys, reach manhood, the second is called to the army to serve, being pronounced the eldest. By some extraordinary calculation the medical men who were consulted at the passing of the act years ago came to the conclusion that the last born of twins was always the first conceived.—*Medical Press and Circular.*

WHAT DID SHAKESPEARE DIE OF?

There is a tradition of very respectable antiquity that he died of a fever contracted through going on a drinking bout with Ben Jonson and other boon companions. Mr. J. F. Nisbet, in his new work, "The Insanity of Genius," discusses the question from an entirely new point of view, that of pathology. In the author's opinion, Shakespeare died of paralysis, or some disease akin to paralysis. The signature to the will, he holds, affords strong presumption of this, but he has also other facts to adduce in support of this theory. In 1657, Dr. Hall's medical cure-book was published by James Cooke, "A practitioner in physick and chirurgery." Dr. Hall, as is well known, was Shakespeare's son-in-law, and his book proves beyond doubt that nervous disease existed in Shakespeare's family, a fact which Mr. Nisbet considers accounts for the short average duration of the lives of its members, and the speedy extinction of the line of Shakespeare's direct descendants.—*Medical Times.*

YALOO, THE DOUBLE-BODIED HINDOO LAD.

Dr. Geo. Bleything, having examined the double-bodied Hindoo lad recently brought to this country, has made the following report in regard to him: "I find him to be a remarkable case of arrested development in fœtal life. The boy himself is a fine, bright, well-developed youth of eighteen years, and attached to the extremity of his sternum is the incomplete body of a twin. The arms are given out from the attachment to the sternum of the young man, without scapulæ. The trunk is short and incomplete, but terminates in a pelvis, with which the legs are connected. There would seem to be no separate heart in the parasite, and the pulse, both radial and axillary, is synchronous with that of the autosite. There is anchylosis of the joints in the undeveloped child. The young man is conscious of a sensation when this second body is roughly touched." The parasitic growth appears to give him very little inconvenience, and he is very agile in his movements.—*Bost. Med. Surg. Jour.*

TUBERCULOSIS IN MEXICO.

Dr. D. Orvañanos states that the federal district of the Republic is a proper place for the prevention and cure of consumption. The elevation of the country varies from 2300 to 2900 metres (7550 to 9500 feet). The mean annual barometric pressure is 15.5 C. (29.09 inches). The maximum temperature is 49.2° C. (120.56° F.); the minimum is minus 7.2° C. (19.04° F.). The mean humidity of the air is 60. The rainfall, in winter, is 22.7 millimetres (0.9 inch); in spring, 174 millimetres (6.96 inches); in summer, 359 millimetres (14.36 inches); in autumn, 63.5 millimetres (2.54 inches). The prevailing wind is N.W. The mean annual amount of ozone is 4.4 tint [test not given].

The *climate* is temperate and pretty equal, with great daily changes. Extraordinary irradiation, due to dryness of the air and the absence of wind and clouds; frequent hoar-frosts during the early morning hours, even in June and July; eternal snow at an elevation of 4 kilometres (13,123 feet,) at a distance of only a few kilometres from the City of Mexico. Inhabitants of the federal district, 440,000.

Consumption Mortality.—Consumption is common in the lower parts of the Republic, up to 1,000 metres elevation (mortality, 15 per cent.) It diminishes gradually, as the elevation increases; in the municipality of Mexico, 8.4 per cent.; in Tacubaya, 5.51 per cent.; in Xochimilco (14,000 inhabitants,) 0.94 per cent.; in the villages of Actopam and Ostctepec (2,000 inhabitants each, pure Indians) consumption is unknown. General average mortality, Tacubaya excepted, 2.07 per cent.

Even advanced cases of consumption may may be cured here, as proven by the experience of medical men and post-mortem records. The higher mortality from consumption in the capital and town of Tacubaya is accounted for by the considerable number of people living in these places belonging to foreign countries and other parts of the Republic (150,000); the rural villages of the district enjoy almost complete immunity from tuberculosis. The author accounts for it in the following manner: The surface temperature of the soil often goes down to 0.° C. (32° F.), causing destruction of microbes and of the bacillus of Koch present in it; the surface of the soil is almost constantly dry, due to the lack of fogs, rapid evaporation, and rarified air. The luminous, calorific, and chemical intensity of the direct sunrays are very great, which helps to destroy the germs.

The author ascribes a considerable germicide action to the exhalations of flowers, which are in bloom almost all the time and over all the district, the essential oils of flowers being powerful germicides.—*El Estudio,* April, 1891.—*Satellite.*

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Clinical Lecture.

DYSMENORRHŒA FROM HÆMATOMA OF THE OVARY—DOUBLE DERMOID CYST OF THE OVARY—TWO CASES OF FIBRO-SARCOMA OF THE OVARY —REMARKS ON DRAINAGE AND THE AFTER-TREATMENT IN LAPAROTOMY.*

BY B. F. BAER, M. D.,

PROFESSOR OF GYNÆCOLOGY IN THE PHILADELPHIA POLYCLINIC.

Gentlemen:—While our patient is being prepared and etherized, I will show you several tumors which I have removed within a short time. This will be the more interesting and instructive because I fear that our case to-day may prove to be of somewhat similar nature to one of the cases I shall relate.

I have in this bottle a small tumor which is an ovary enlarged to about three times its natural size. On the same day on which this tumor was removed, I removed from another patient this tumor, which you see is large, solid and formidable looking; it weighs 15 pounds. Yet the patient with the smaller tumor suffered far more than the latter. This disproportion between the size of the tumor and the amount of suffering is one of the interesting and important circumstances met with in ovarian disease, and teaches the valuable lesson that the patient who happens to have a small tumor should not for that reason be condemned to a life-time of torture, when we know that her disease is as certainly incurable without operation as is that of the patient whose tumor happens to be large.

The patient from whom the small specimen was removed is 31 years of age, and had one child nine or ten years ago. Since that time she has been sterile. So far, therefore, as fertility is concerned, her ovarian function has been useless. Puberty occurred at the age of 13, and menstruation had been constantly attended with pain in the left ovarian region. For this she had been treated in various ways and by different methods, but without result so far as cure was concerned. Dysmenorrhœa is so often spoken of as resulting from one cause only, stenosis of the cervical canal or anteflexion of the uterus, and as, therefore, amenable to but one plan of treatment, by dilatation, that I can say nothing more important to you than to ask you to free your minds from this idea. The term should be used in its generic sense only, as expressing a symptom for which there are many causes, both general and local.

The patient had been worse since the birth of her child, and recently was almost constantly bed-ridden from pain and exhaustion; she could obtain relief only by the use of morphia, to which she had become addicted. Two years ago she was treated for retroflexion of the uterus to which was ascribed all of her suffering. I believe this was an error; the symptoms were not due to the displacement, but to a diseased left ovary. The trouble was doubtless aggravated by the complication, but the mechanical means used (in the form of a large pessary) for the retention of the organ, served only to increase the symptoms. As was to be expected the patient became worse. The diagnosis was wrong and the treatment necessarily at fault.

When she entered my private hospital she was emaciated and exhausted, and complained of constant pain in the left ovarian region. Upon examination I at once detected a tumor to the left of the uterus, and posterior to the broad ligament, which I knew to be an enlarged ovary. It had the peculiar shape of the ovary, only somewhat more rounded, and it was excessively tender on pressure, and mobile. As the patient approached her menstrual periods the tumor

*Delivered at the Hospital of the Philadelphia Polyclinic.

became larger and more tender, from congestion of the ovarian vessels, and the hæmorrhage into the Graffian follicle, which occurs during the ovulation excitement. Excruciating pain resulted from the swelling and distention, and was described by the patient as resembling the sensation which might be produced if the ovary were within the grasp of a vise. There was also a sense of numbness extending all over the affected side, from the ovarian centre upwards to the præcordial region, even extending to the side of the face and head, and downwards along the line of the genito-crural nerve and its inosculations, to the labia majora, inside of the thigh and to the foot, producing such lameness as to render walking extremely difficult and painful at times. These symptoms and physical signs pointed conclusively to the condition known as hæmatoma of the ovary. As indicated above the tumor results from an undue amount of hæmorrhage into the Graffian follicle and retention of the blood from failure of the outer covering of the ovary to rupture, and discharge its contents into the Fallopian tube to pass off as menstrual hæmorrhage, as is the case when the function of ovulation and menstruation is normally performed. Nature now attempts to repair the damage by bringing about an involution of the hæmatoma, as she does when a normal corpus luteum is formed; but she often fails, and the clot then remains as a small dark body. In some cases the ovary is completely riddled with these masses which, becoming hard, press upon the nerves, and thus add to the patient's suffering and serve to render constant the pain which at first was only present at the menstrual periods.

This disease is incurable except by removal of the affected organ and I at once advised operation. An incision an inch and a half in length, through a rather fat abdominal wall, was sufficient to permit me to complete the operation. Upon bringing the ovary up, I found, as I had expected, the condition here exhibited in the specimen. There was one large hæmatoma the size of a walnut, which is still unruptured, and at least four or five smaller ones in varying stages of subinvolution. At the same time I brought the uterus forward by shortening the round ligament on the left side. The process of shortening was accomplished by doubling the ligament upon itself and including it in the ligature which I used in ligating the pedicle. At the patient's request I removed but one ovary, the other being comparatively normal.

I have met with a good many cases of hæmatoma of the ovary, and have employed various methods for the relief of the patients, but I am more than ever convinced that the proper treatment is the removal of the organ. This operation is attended with but little risk when done properly.

DOUBLE DERMOID CYST OF THE OVARY.

Two days preceding the operation for the hæmatoma I removed these specimens. The patient was 32 years old; she had one child seven years of age and a second four months ago. Two years ago she began to complain of pain in the right ovarian region, which had continued ever since with increasing severity. She had become pregnant, however, and had given birth to a strong, healthy child after a normal labor. Soon after the parturition she left the city, but as she was rapidly losing flesh she returned, and then I saw her. On examination I found the abdominal wall extremely emaciated and quite relaxed, and through it I could detect a jagged mass, very irregular, lobulated, and flattened in shape, and at one point quite tender on pressure. It was very mobile and as large as a child's head. I also found a tumor in the lower pelvis, fully as large as the one in the abdominal cavity. The uterus was pushed up and to the right. The pelvic tumor was immovably fixed but not tender.

I expressed the belief that the pelvic tumor was an incarcerated ovarian cyst, but I was not certain as to the one occupying the abdominal cavity. Its irregular, flattened, lobulated shape and non-fluctuating character, together with its extreme mobility and the rapid emaciation of the patient, led me to fear that it might be a malignant growth, possibly of the kidney, although the urine did not show any evidence of disease of the latter organ. I advised that the child, which the patient was nursing, should be immediately weaned, and that laparotomy be performed as soon as the breasts had dried up.

The operation was performed at the home of the patient. After she was anæsthetized and lying upon the table, the abdominal walls lay flat and relaxed about the tumor in such a manner as to make it look exceedingly malignant in its roughness and irregularity. An incision two inches in length was made midway between the umbilicus and the pubis, and the tumor exposed to view. To my delight I detected the peculiar color of an ovarian cyst. Introducing two fingers, I found it to be free from adhesions

except at the point corresponding to the tenderness, but I could not at first find that it had a pelvic attachment, being apparently free in the abdominal cavity. After examining very closely for a pedicle, I discovered what seemed to be the broad ligament and Fallopian tube stretched and flattened out against the posterior surface of the superior strait, being held in this position by the pelvic tumor. Placing my finger under this apparent pedicle, I was able to trace it to the tumor, and bringing it to the incision made myself sure that it was the Fallopian tube and broad ligament. I now punctured the tumor with a trocar, although it appeared to be almost solid, when there began to flow the peculiar oily substance which is characteristic of dermoid cysts. After more than a pint of this semi-fluid substance had been evacuated the trocar was withdrawn, when the puncture was immediately filled and plugged by a mass of hair. Although the tumor was still quite large, I was able, by manipulation and some force, to withdraw it through the small incision. The pedicle was exceedingly vascular, the veins in the broad ligament being as large as my finger. After ligating the pedicle and separating the tumor, which was of the left ovary, the one in the pelvis was with great difficulty dislodged and brought up to the incision, when it was also punctured. Fluid, in quantity and character similar to that described above, flowed out, when the tumor slipped through the incision. A pedicle of like character as to vascularity and length was ligated and severed. The abdomen was now thoroughly cleansed and the incision closed, neither irrigation nor drainage being used.

The after history was without event, except in a decided evidence of heart failure on the second day. This was controlled by active stimulation kept up during the night. She sat up on the eighteenth day after the operation, and is rapidly regaining her lost weight and strength.

This case has an added interest, apart from the mere presence and removal of the double dermoid disease, in the gestation and parturition during the existence of the tumors. It not only shows the wonderful struggle and persistence of the procreating function, but also furnishes food for thought as to what should be done with these tumors when they are found to complicate pregnancy. There is a growing disposition to operate early in gestation when pregnancy is found to be complicated by ovarian tumor. This individual case went to full term and was safely delivered, but that does not prove that the rule is not a good one.

FIBRO-SARCOMA OF THE OVARY.

The next specimen is of peculiar interest to us, because I believe the case I shall operate upon to-day is of like character. The patient from whom this large, solid tumor was removed is 39 years old, and had one child 16 years ago. Nine years ago she was operated upon for laceration of the cervix uteri. The account given me by her physician was as follows:

Supposing herself to be pregnant, she engaged the physician for the approaching labor, which, however, did not come on at the expected time. When a month beyond the appointed time had passed, her physician called upon her and found her still waiting for the commencement of the labor, presenting the appearance of a woman at full term, ruddy and healthy looking. She said she could feel the active movements of the child. Another month passed, and then suspecting something wrong the physician questioned her more carefully, and found that she had been menstruating regularly, and that there had not been any mammary changes or other rational signs of pregnancy, excepting the abdominal enlargement and the supposed fœtal movements. Examination showed that the cervix was hard, and that the pelvis was occupied by a mass closely resembling the head of a child. The tumor could be felt high up in the abdomen. The doctor therefore properly excluded gestation.

Shortly after this I first saw the patient, and examination informed me that the womb was retroverted and somewhat prolapsed, but movable. When the tumor was moved the womb moved also, which is one of the diagnostic signs of uterine fibroid, or at least that the growth is uterine, and yet from the position of the tumor I believed it was external to, and not connected with the womb. I could not detect any fluctuation. The tumor was smooth and entirely mobile. It was with difficulty I convinced the patient that she was not pregnant. She was positive that she could feel the fœtal movements. This was due probably to the mobile condition of the growth, which moved to accommodate itself to the movements of the intestines; and then the imagination furnished the rest. I made a diagnosis of probable sarcoma of the ovary and advised its removal. A fibroid tumor of the womb would not have attained such size in nine months or a year, a point which aided me not a little

in my diagnosis. After a few weeks of hesitation and doubt on the part of the patient, she consented to the operation, and it was performed at her home.

When I reached the growth, I found it to be so extremely vascular that I believed I had to deal with a fibroid tumor of the womb. I was compelled to make a seven inch incision before I could get the tumor out of the abdomen, and not till then did I learn that the womb was below and independent of the growth. It had no relation whatever with the uterus, except through the ovarian and broad ligaments. These I now clamped and then cut the tumor away, leaving a very large pedicle. I next transfixed and ligated the pedicle and removed the clamps. After cleansing the abdominal cavity the incision was closed without drainage. As the other ovary was healthy I did not remove it. The stitches were removed on the seventh day and she made a good recovery. The tumor weighed fifteen pounds.

FIBRO-SARCOMA OF THE OVARY.

Our patient being now about ready for operation, I will give you a brief history of the case before beginning. She is a single woman, 30 years of age; she entered puberty at 18; the menstrual function has always been performed with difficulty, but otherwise she enjoyed good health until about a year ago. At that time she discovered a lump about the size of her fist in the left iliac region, and she remembers that it was hard and quite mobile. She says she could move it to either side and up and down, as though it were loose in her abdomen. From this time the mass increased rapidly in size. Six months ago she had an attack of la grippe, and this was accompanied with great soreness all over the abdomen extending around to the lumbo-sacral regions. Since this illness she has been going down hill rapidly, and the abdomen as you see, has increased to the size of the full term of gestation; she has become emaciated and is quite cachectic in appearance. She suffers considerable pain in the lumbo-sacral regions, and has great irritability of the bladder. There is also some œdema of the feet and legs. Her catamenia are regular in time and quantity. As you observe, the abdomen is symmetrical and smooth in contour. On palpation a round, firm mass of the size and somewhat the shape of the pregnant uterus at full term is outlined. This mass is not movable within the abdominal cavity, but seems to be firmly adherent to the abdominal walls. The veins are distended and there is a purplish hue of the surface, showing a decided interference with the circulation. There is only a faint suspicion of fluctuation. There is dulness all over the anterior surface of the abdomen with resonance in the line of the colon. Per vaginam, yesterday, the uterus was found to be slightly above the normal in size and seemed to be free from the tumor. It occupies a position below and to the right of the mass. The diagnosis as to the exact character of this growth is obscure, but I believe it to be ovarian, and hope it may prove to be a thick-walled cyst, for I know it is not thin-walled. I fear, however, that it may be a solid tumor of the ovary. Its very rapid development, peculiar conformation, and its relation to the uterus, together with the marked effect it has had on the patient's health, render it almost certain that it is not a uterine fibroid. But, whatever it is the indications are clear for its removal.

I now begin by making an incision two inches in length and expose the tumor to view. I am sorry to say that it has the peculiar purplish color and vascularity common to fibroid tumor of the uterus; but it is firmly adherent to the abdominal wall, and this causes me to hope that it may still prove to be ovarian, for fibroids of the womb, as a rule, are not adherent to the abdominal wall. It will be necessary to increase the length of the incision, so that I may safely separate adhesions and introduce my hand to learn if possible where it is attached. I am glad to say that I can trace its pedicle, which is small, to the region of the left ovary, but I also learn that it is universally adherent to the peritoneal surface and that there are a number of strong intestinal and omental adhesions. I begin the separation of the adhesions by tying off the omentum, when I find that it will be necessary to still further increase the length of the incision to fully six inches. Now you can see how extensive and firm the intestinal attachments are, and what care will be necessary in their separation. As I proceed with the dissection I find it necessary to leave a portion of the outer wall of the tumor in contact with the intestine, for fear of tearing the latter. This results in so much hæmorrhage that I am compelled to ligate the surface of the bowel as we advance. There is considerable hæmorrhage from the torn surface of the tumor, and it will be impossible to check this because of the broad surface denuded, and the impossibility of ligating on the solid mass. With the hope that the tumor is not entirely solid, and that I may reduce its

size and thus facilitate the separation of the adhesions and check the bleeding, I will now plunge a trocar into it. But you see this was a mistake, for the tumor proves to be solid and we are compelled to proceed as we were doing at first. This large surface which I have just now separated is bleeding so profusely because I have wounded the muscular wall of the intestine; it is necessary to double it upon itself and ligate it, and this makes a decided knuckle; even this does not stop the bleeding. I will therefore pass a ligature in a needle and ligate it in the form of a suture. This controls the bleeding and will also serve to unite the torn muscular coat. I now continue the separation and ligation from point to point until we have the tumor entirely free except an attachment to the colon which I next separate, placing here several ligatures. I will now lift the tumor from the abdominal cavity, and am glad to say the pedicle is small and that the tumor is of the ovary. I next quickly grasp the pedicle with a clamp forceps, and cut the tumor away, placing a warm towel immediately over the intestines, while an assistant closes the incision by placing a hand on either side. Before ligating the pedicle I will look carefully for bleeding points that may have been missed, and I find it necessary to place several additional sutures along the line of the intestine. I next transfix the broad ligament with this pointed forceps which has in its grasp a *single* ligature, with which I tie, first towards the uterus, and then towards the outer surface of the ligament, bringing it back again to the point first tied, making three knots. Removing now the clamp forceps, I find the bleeding entirely controlled. I therefore cut the ends of the ligature close to the knot and drop the pedicle. The right ovary is in a healthy condition and I will therefore not remove it, since the patient requested me to leave it if not diseased, although in view of the character of the tumor I believe it would be wise to remove it. You observe that the patient is very weak, being pulseless at the wrist, and I will ask a nurse to administer a stimulating enema, which I always have in readiness, while I make the toilette of the peritoneum and finish the operation as rapidly as possible. But I will first place the sutures for the closure of the incision. These are of Chinese silk, as all my ligatures are, and I carry the needle from without inwards, including the peritoneum and then from within outwards on the opposite side, about three to the inch, until they are all placed. Now carefully removing all clots and fluid and being sure that no bleeding is taking place, I close the abdomen without irrigation or drainage. The dressing will consist of first dusting the line of incision with aristol as a desiccant, covering it with a strip of sterilized gauze and a thick pad of cotton which is surrounded with sterilized gauze, all of which are strapped firmly with adhesive plaster. The patient is now returned to bed, a bag of hot water placed to her feet and a hypodermic injection of morphia and atropia at once administered.

REMARKS ON DRAINAGE, AND THE AFTER-TREATMENT IN LAPAROTOMY.

I think you will agree with me that this was a formidable operation, and that the outlook for the recovery of the patient, in view of the extensive ligation along the line of the intestinal track, is anything but favorable. But we have done our best and must trust the result, not alone to kind nature, but to vigilance and care in the after treatment. One of the gentlemen has just asked me why I did not irrigate and drain in this case? This, therefore, is a very appropriate place for a few words on the technique of the operation and the after management. You observed that I was careful to remove all foreign material from the abdominal cavity, and, as I succeeded in doing so, I believe that irrigation would have been an unnecessary and meddlesome procedure. On precisely the same principle, I did not drain. As there was nothing to drain it would have been unscientific and meddlesome practice to have placed a drainage tube. Now, it is self-evident that if the patient recovers as well without it, drainage was unnecessary, and that she was therefore better off than if I had left a drainage tube projecting into the abdominal cavity, to serve as a certain means of irritation and a possible source of infection and fistula, to say nothing of a predisposition to hernia by weakening the lower end of the cicatrix. Some time ago, while I was operating for the removal of several fibroid tumors, I was honored with the presence of a prominent surgeon who has had a large experience in abdominal work. Considerable hæmorrhage occurred. When I was ready to close the incision and he found I was doing so without irrigation or drainage, he remarked that he could not resist the criticism that I was taking great risk and that he would not himself have the courage to close the wound without first flushing the abdominal cavity and inserting a drainage tube. I replied that I would have more fear

of a drainage tube in a case where I considered it unnecessary, than in closing the wound without it; that I felt confident my patient was better without the tube. My friend said he would watch the case with great trepidation, and if she did well it would be a revelation to him. I am glad to say the patient recovered without a bad symptom. Some of you recall the case.

Greig Smith, in his classical work on Abdominal Surgery, has advanced the proposition, "When in doubt,drain," and this has become an axiom for operators. Some abdominal surgeons apply drainage in almost every case. But I believe the time is not far off when the technique of abdominal work will have been so perfected that the use of the drainage tube will be the exception instead of the rule. (I am now speaking of cases in which extensive peritoneal and cellular suppuration is not present.) I have added two words to Smith's dictum so that it reads for me, "When in doubt, *do not* drain." This is the principle upon which I have been working for several years and I am convinced of its soundness. If I use a drainage tube I must feel sure that it is necessary; if I am in doubt I do not drain. This method is not founded upon theory alone, for I have demonstrated beyond question that the practice is correct. I have now reached the ninety-sixth of my last series of one hundred completed ovariotomies. Of these ninety-six cases there has not been a death from the operation, and I have used a drainage tube only in three, and they were early in the series. In many of the cases adhesions were universal and organized, and some were pus cases. The patients recovered more quickly and are better in every way than those of the series immediately preceding this one, in which I used the drainage tube more frequently. But more of this again.

Regarding the after-treatment. The patient has already had one hypodermic injection of morphia and atropia, and this will be repeated if necessary during the afternoon or night; and if required will be repeated again, especially if she is emotional or there is a tendency to vomiting. Of the series just referred to I do not believe there have been six cases that have not had one or more hypodermics during the after-treatment, and I have nothing but good to say of the practice. The diet will be liberal and will be commenced at once in the form of stimulating enemata. It will consist of half an ounce of whiskey and six ounces of warm water through a fountain syringe, every four hours, until to-morrow at 4 A. M. She will then get barley water by the mouth in teaspoonful doses every hour. If this is well borne, after several doses have been taken, beef juice in similar quantity will be substituted. I do not mean beef tea, but beef juice which is obtained by pressing fresh beef after it has been broiled slightly on one side. If the digestion proves good, the beef juice will be increased to a tablespoonful every two hours, and the patient may then have barley water or plain water *ad libitum*. When feeding by the mouth begins, the enemas are discontinued. When flatus has passed per anus, which usually occurs within forty-eight hours, if the patient is hungry she will get a small cup of tea or coffee with soft toast and probably a soft egg. I rarely give milk in any form, never until the bowels have moved. Since I have discontinued the use of milk and do not use the drainage tube, I do not have to treat tympanites. If the bowels do not move spontaneously within three days, a Lady-Webster pill or Epsom salts will be administered as a laxative. The patient will be turned on her side within twenty-four hours, and earlier if she desires. The custom of compelling the patient who has undergone laparotomy to remain in the dorsal position is a barbarous one. It is not only unnecessary but positively injurious. Two of the most important factors in the after-treatment of these cases are stimulation of intestinal peristalsis, and rest of body. By compelling the patient to occupy the dorsal position, this order is reversed, the result being arrest of intestinal peristalsis and physical exhaustion from the constant and strained position. I believe the practice has contributed not a little to the mortality, and am sure it has caused a great amount of unnecessary suffering.

Examination of the specimen shows the Fallopian tube and some large vessels spread out over the tumor. On section it is found to be quite solid and fibrous in appearance, except at one point where a small cavity is seen. This contains a semi-fluid, yellowish substance which somewhat resembles the fluid found in fibro-cysts of the uterus. Placing this tumor by the side of the other solid one shown you just before the operation, we see how much alike they are in size, shape and consistency. Although they have not yet been examined microscopically, I think they are fibro-sarcomas. Solid tumor of the ovary, of the size of these growths, is very rarely met with, and, although these tumors look very like true fibroids, I think it will be shown that they contain sarcomatous elements.

In that event what will be the future history of the patients? Will the disease return? If, as in these cases, the development is purely local, I think experience teaches that it does not recur. But much, if not everything, depends upon the time of operation. The longer the delay the greater the danger.

[The patient was shown to the class three weeks after the operation. She had made a good recovery.]*

*Since this lecture was delivered, Dr. Baer has completed his last series of one hundred ovariotomies. Two of the last four were of that class of neglected cases in which recovery is always doubtful. In one, a universally adherent 50 pound poly-cyst, the patient was so weak that the radial pulse could not be felt. The patients are doing well.

COMMUNICATIONS.

VALUE OF ANTIPYRIN AS A LOCAL APPLICATION IN INFLAMMATION OF THE MUCOUS MEMBRANE OF THE UPPER RESPIRATORY TRACT.

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During the fall of 1889 the writer contracted a severe cold as the result of exposure incident to living in a house undergoing repairs. In spite of caution, one cold succeeded another until the resulting laryngotrachitis became so severe that talking at all was exceedingly fatiguing and the voice could scarcely be raised above a whisper. Coughing, especially after meals, was frequently followed by emesis, so that for a considerable time, at least one meal a day was vomited almost as soon as swallowed, and considerable loss of flesh resulted.

The constitutional treatment adopted in this case and some of the others to be cited need not occupy our attention as it is not germain to the subject of this paper. The use several times a day of a bottle inhaler containing hot water and compound tincture of benzoin gave more or less relief. Inhalations of the spray from an atomizer containing wine of ipecacuhana, a form of treatment suggested by Dr. William Murrell, of London* invariably relieved the congestion by producing a large amount of secretion from the larynx and trachea; which being coughed up, relieved the sense of fulness in the throat and chest and rendered talking easier and less fatiguing. Inhaling the ipecac spray even when diluted with one to three parts of water, however, often produced at once reflex vomiting. Indeed so sensitive was the larynx at this time, that even a spray of fluid cosmoline seemed irritating and the impact of powders thrown into the larynx with a powder-blower, was absolutely painful. Prolonged inhalation of the ipecacuhana spray also produced nausea which remained for some time after the inhalation was discontinued. In spite of these disadvantages, however, the spray of dilute wine of ipecac rendered better service than any other remedy that had been used as a local application previous to employing it. The use of powders by means of the powder-blower was almost out of the question. Since no matter what their composition, the mere impact of them upon the inflamed laryngeal mucous membrane produced pain and was followed by violent attacks of coughing which quickly expelled the powder from the larynx and rendered any effect from it except that of an irritant, impossible.

During all this time, nasal symptoms gave but little annoyance. A pledget of absorbent cotton saturated with a 4 per cent. solution of cocaine was inserted within each nostril every morning when required and relieved at once the stenosis and checked the free discharge, and this effect of the cocaine could be maintained for several hours by spraying the nose with a 4 per cent. solution of antipyrin. At bed time the application of cocaine and the use of the antipyrin spray rendered it possible to sleep with the mouth closed until nearly morning. So great indeed was the relief afforded by the use of a 4 per cent solution of antipyrin as a spray within the nose, that it was finally inhaled, being drawn by deep inspirations through the larynx and trachea and as far into the bronchi as possible. These inhalations of antipyrin spray were repeated at first from eight to twenty times a day. Within a week or twenty days, all signs of laryngeal and tracheal disease had disappeared. Since that time, the writer has frequently prescribed antipyrin, both alone and in combination with cocaine, menthol, &c. in various combinations as an analgesic application to the inflamed mucous membranes of the upper respiratory tract, not only when the inflammation was catarrhal but also when of specific origin, and always

*On cases treated with ipecacuhana spray at the Westminster Hospital, by William Murrell, M. D., F. R. C. P., *The Medical Register*, May 5, 1888.

with satisfactory results. Two to four per cent. solutions of antipyrin have also been prescribed in a few cases of conjunctivitis and chronic urethritis, with the result of diminishing congestion, irritability and discharge. Applied in solution to the mucous membrane of the eye, nose, larynx, or urethra, it produces at first a smarting sensation and seems to act as an irritant in proportion to the strength of the solution used. This smarting sensation, which, however, does not occur in the pharynx even when strong solutions are used, lasts but a few moments and is followed by a sensation of relief and comfort, when the mucous membrane to which it was applied was before inflamed and irritable. The analgesic effect of antipyrin solutions when applied to inflamed mucous membranes lasts for several hours, and may apparently be maintained indefinitely, if the solution be applied at sufficiently frequent intervals. Given internally, antipyrin, not only exerts a local analgesic effect upon the mucous membrane of the stomach if it be inflamed; but is a powerful antispasmodic producing this effect it is said by diminishing the excito-motor power of the cord. Applied locally, antipyrin solutions seem to also act as an antispasmodic, diminishing the reflex cough of certain nasal affections and the reflex gagging and retching so annoying in certain forms of pharyngitis. Beside all this, antipyrin is a powerful antiseptic; a five to ten per cent. solution being more active according to Caravir than Van Sweeten's liquid.

When a four per cent. solution of cocaine is applied to the inflamed mucous membrane of the nasal chambers, the sensations from the very first are pleasant. The mucous membrane soon becomes pale and bloodless and shrinks with the so-called erectile tissue beneath to a small bulk. Secretion is checked, but not to an extent to make the nose feel dry and uncomfortable; while increased breathing space and the stimulating effects of the cocaine absorbed, produce a feeling of buoyancy. By a single application of four per cent solution of cocaine to the nasal mucous membrane, all the more distressing local symptoms of a "bad cold in the head" may generally be checked in a few moments, but the relief lasts for but half an hour or so. It is however far otherwise when a solution of cocaine applied to the posterior wall of the oro-pharynx. Instantly a feeling of discomfort is produced; the pharynx feels as if suddenly parched by a current of hot, dry air, or as if a ball of absorbent cotton had been left in the pharynx; gagging, retching and even vomiting occur as the patient vainly strains to dislodge a supposed foreign body. This disagreeable effect of cocaine when applied to the posterior pharyngeal wall seem due to a sudden checking of its secretions, because the same disagreeable sensations occur when a dry powder or a strong astringent solution is applied to the entire posterior pharyngeal wall. Cocaine and strong astringent solutions may however be applied to the tonsils and pillars of the fauces without producing any disagreeble results. Indeed, acute cortical tonsilitis may be treated with most excellent results by carefully painting the tonsils every half hour with a four per cent. solution of cocaine or twice a day with a solution of nitrate of silver of the strength of one or two drachms to the ounce, care being exercised in either case that none of the solution reaches the posterior pharyngeal wall.

Far different are the sensations produced by the spray from an atomizer filled with a four per cent. solution of antipyrin. Thrown upon the inflamed mucous membrane of the nose it produces at first, a most disagreeable smarting and burning sensation, only partially relieved by frequent sneezing. When, however, the burning and smarting sensation passes away, as it does in a few moments, the anterior of the nose presents somewhat the same appearance as if a weak solution of cocaine had been used. The mucous membrane and turbinated tissues are pale and somewhat shrunken. There is no local anæsthesia however, but local *analgesia* which persists for four or five hours; and during this time the discharges from the inflamed nasal mucous membrane are very much diminished. Yet, so great is the primary irritating effect of solutions of antipyrin when applied to the nasal mucous membrane, that it is not well to employ them of a greater strength than four per cent. and only then after the nasal mucous membrane has been anæsthetized by cocaine. In some cases of hay fever, it is impossible to employ antipyrin solutions at all with benefit as they seem to act only as irritants. When applied to an inflamed posterior pharyngeal wall, powdered antipyrin or a spray of its solution produces no primary irritation, but at once a feeling of relief and comfort. After several applications, the reddened mucous membrane becomes distinctly lighter in color and, in some instances, assumes almost normal appearance.

Applied to the larynx, a four per cent. solution of cocaine produces no disagreeable sensations, unless some of the fluid reaches

the pharyngeal wall. The mucous membrane is anæsthetized and becomes pale and bloodless; but so transitory is this effect, that the secretions seem in no wise diminished, but rather increased in amount as the effects of the cocaine last but a few moments and are followed by a certain amount of reaction. When powdered antipyrin or a strong solution of the drug is applied to the laryngeal mucous membrane, it produces a sharp burning sensation, which however is but momentary and is followed by bleaching of the mucous membrane and diminution of its secretions. If the voice was previously husky from inflammation, it improves in quality. If talking was previously painful, a single application of powdered antipyrin produces a certain amount of analgesia, so that use of the voice is not so painful. The local analgesia is not complete, because the disease in such cases ordinarily involves parts deeper than the mucous membrane.

The following cases will illustrate the therapeutic applications of the drug:

Case I.—Acute Coryza with Catarrhal Conjunctivitis.—A married lady, thirty years of age, "caught cold the previous evening by sitting in a draft." Both nasal chambers are occluded and a profuse nasal discharge requires an almost constant use of the handkerchief. The eyes are suffused and congested. The papular conjunctiva is intensely red and at the outer portion of the right upper lid are a few swollen papillæ, which produce the sensation of a foreign body and greatly increase the patient's discomfort. She states that she cannot use her eyes without pain. Treatment consisted in washing the nasal mucous membrane with the spray of an atomizer containing an alkaline antiseptic solution; large pledgets of absorbent cotton being then placed between the lower turbinated body and septum, and a drop of a two per cent. solution of antipyrin is instilled into each eye. After sufficient time has elapsed for the cocaine to produce its characteristic effects, the pledgets of absorbent cotton are withdrawn and the interior of the nose is sprayed with a four per cent. solution of antipyrin and afterwards with a three per cent. solution of mentholin fluid cosmoline. The patient now says that she feels entirely comfortable; she can breathe through her nose, and its discharge is checked, and her headache is gone. Her eyes too have altered their appearance; they are no longer suffused nor is the ocular conjunctiva injected. The papular conjunctiva however, is still redder than normal and another drop of the two per cent. solution of antipyrin is instilled into the eyes. It does not produce the same amount of smarting as did the first drops. She is directed to take powders containing one-third of a grain of calomel and five grains of the bi-carbonate of sodium at intervals of an hour until six powders have been taken and to use the two per cent. antipyrin drops and an atomizer containing a four per cent. solution of antipyrin every two hours. The next morning she reports that the calomel powders have produced one or two loose evacuations, that her eyes have ceased to annoy her and that she is, in fact, free from all symptoms of her cold. However, she was directed to continue the treatment for one day longer.

Case II.—Acute Folicular Tonsilitis.—A boy fourteen years of age who had caught cold the night before, since which his throat has been so sore that swallowing was painful. Upon inspection, the entire oropharynx appeared red and congested. The tonsils were swollen and covered by an exudate from the inflamed follicles. The breath is somewhat fœtid. There is some elevation of temperature. An alkaline, antiseptic spray was thrown through the nose into the naso-pharynx. This brings down considerable mucus from above the tonsils and affords considerable relief. As the nasal mucous membrane is somewhat inflamed, it is coated with a light coating of calomel and protected by a layer of fluid cosmoline which is thrown into the nose as a spray. The tonsils were next washed with an alkaline antiseptic spray and as much as possible of the exudate removed by means of a pledget of absorbent cotton wrapped about a probe and dipped in a solution of peroxide of hydrogen. By means of the powder blown, the tonsils and oropharynx were then covered with powdered antipyrin. As soon as the powder has had time to dissolve in the secretions of the parts, the patient expresses himself as feeling very much better. He was directed to take at once a wine glass full of Hunjadi water as a cathartic, and to have a friend blow in his pharynx and upon his tonsils one and one-half grains of antipyrin every two hours. From this treatment, the patient experienced at once a great deal of relief and the fauces presented their normal appearance on the third day.

Case III.—Hypertrophic Rhinitis and Chronic Pharyngitis.—This patient, a commercial traveler, came to me for treatment July 7th, 1891. I made an examination of his nose and throat some months before that date. He was one of the most robust men

that I ever met. Not noticeably fat, his weight must have been about three hundred pounds; yet he stated that his throat had been for years a continual source of discomfort and anxiety to him, and that he had given up an advantageous position in a western city because the climate seemed to make his throat worse. In fact, while there during one of the numerous acute exacerbations of his ailment the symptoms became so alarming that he thought he was surely going to "choke to death," and was sure that he would "never survive such another attack." He stated furthermore that his throat was almost raw from continual hawking, and that he had been to several specialists without permanent benefit. He was a man of most excellent habits, and used neither tobacco nor liquor.

His nasal chambers presented the ordinary appearances seen in chronic rhinitis. There was a small ecchondrosis in the left nasal chamber and some hypertrophy of the turbinated bodies, but not enough to produce stenosis or suggest the urgency of operative interference; although doubtless the condition of his nose had much to do with his distressing pharyngeal symptoms. His entire fauces were intensely red and congested and so exquisitively sensitive that even the tongue depressor had to be used with the utmost care to prevent retching. It was impossible, at his first visit, to use either the laryngoscope or rhinoscope as the mere suggestion of putting a mirror in his fauces almost produced emesis.

Office treatment consisted in washing the nasal chambers with the spray from an atomizer containing an alkaline, antiseptic, sedative, solution. Secretion in the nose and naso-pharynx was by no means abundant, and the spray brought down but a moderate amount of mucus, which with much gagging and retching, was finally expectorated. The clean nasal and naso-pharyngeal mucous membrane was then sprayed with fluid albaline and a small amount of finely powdered calomel distributed over it with the powder-blower. The fauces were sprayed several times at short intervals with a twenty per cent. solution of antipyrin and the patient was instructed to inhale as much of the spray as possible. This was all that was done at the first visit, but my patient left me feeling much more comfortable, with his pharynx distinctly lighter in color, and for the next four or five hours there was but little hawking and gagging. At his second or third visit it was possible to use both the laryngoscope and rhinoscope, and make applications to the congested mucous membrane of the pharyngeal vault and larynx. At home he used several times a day an atomizer containing a four per cent. solution of antipyrin, directing the spray into his pharynx. He also took, at first three times a day and afterwards only at bed time, eight grains of the bromide of sodium and three grains of the iodide of sodium. From July 7th, to July 25th, he made eight visits to my office, at which date his throat gave him so little inconvenience that he ceased his visits. I saw him next, September 24th. The pharynx presented an entirely normal appearance but was still somewhat sensitive. He was directed to resume the use of the antipyrin spray and occasionally take at bed time a mixture containing bromide of sodium.

Case IV.—Chronic Laryngitis with Bronchitis.—A man about thirty years of age, married, and a professional singer, inasmuch as he is a member of a church choir and obtains a considerable income from singing at social gatherings, weddings, funerals, etc. His first visit to my office was made in June, 1890. He stated at that time that he had suffered from a severe cough for some months and had lost in weight. That expectoration was scanty during the day, but that each morning the expectoration was profuse; and that he felt oppressed each morning and unable to work until repeated coughing had dislodged a large quantity of mucus. His voice had become treacherous and frequently showed signs of failing him while singing; so that singing was much more fatiguing than formerly. It was often very difficult, sometimes impossible to sustain his notes. He had lost the power to sound one or more of the higher notes at all, and the character of his voice had changed and was losing its purity of tone. One object in coming to me was to ask advice as to the advisability of giving up singing entirely. As it was a source of considerable revenue to him, I advised him emphatically not to do so, but to use his voice as little as he could aside from filling all his professional engagements. Constitutional treatment consisted in the administration of cod liver oil, and tonics, whilst out door exercise was also advised. He inhaled each morning, when necessary, the spray from an atomizer containing equal parts of wine of ipecacuhana and water and continued the inhalations until the sense of oppression in his chest had been relieved by the profuse expectoration which these inhalations produced. Several times a day and more especially at bed time he inhaled the spray from an atomizer containing a four per

cent. solution of antipyrin. Twice or thrice a week a powder consisting of equal parts of powdered sulphate of zinc and starch was thrown into his larynx and as far as it would go into his trachea by using the powder-blower at my office during forced inspiration. Under this treatment, his general health rapidly improved and he increased in weight from 130 to 152 pounds. Expectoration greatly decreased in amount. His sleep was no longer disturbed by coughing, nor was it necessary to use the spray of wine of ipecacuhana in order to relieve congestion of the bronchial tubes and dislodge the amount of mucus that had accumulated over night, as the antipyrin spray not only relieved the congestion of the parts but also controlled excessive excretion. The voice also gradually improved in quality, and the power to sound the high notes that had been "lost" was regained with the ability to sustain his notes during singing. During the first months of treatment he was in the habit of taking a teaspoonful of the fluid extract of coca in a glass of sherry a few moments before singing as a stimulant; but ultimately he came to the conclusion that he sang better without it, and at the same time he stated to me that he did not think that he had ever in his life before been in better health or voice.

Previous to January 1891, I used antipyrin locally in the larynx only as a spray and in dilute solutions. At this time, however, my attention was attracted by a paper by Drs. E. Coupard and E. Saint-Hilaire upon "De Quelques Usuages de l' Antipyrine Dans Les Affection de la Gorge et du Larynx. † In this paper, the authors advise the application of concentrated solutions of antipyrin (four to sixteen grammes of antipyrin to ten grammes of water,) and state that solutions of antipyrin of this strength are caustic and produce a severe burning sensation. ‡ Numerous cases are cited exhibiting the beneficial effects of these applications not only in acute and chronic laryngitis but also in tubercular laryngitis even in advanced stages of the disease. Since reading this valuable and interesting paper, I have used fifty to one hundred and fifty per cent. solutions of antipyrin in various inflammatory affections of the laryngeal mucous membrane; sometimes making my applications by means of the spray from an atomizer, some times by means of a pledget of absorbent cotton wrapped about a probe and passed dripping with the solution into the supra-glottic portion of the larynx. Lately I have used almost entirely powdered antipyrin, throwing it into the larynx and sometimes into the trachea during inspiration by means of a powder-blower. When thrown upon the inflamed mucous membrane of the larynx, antipyrin produces a burning sensation, sharp in proportion to the amount of the powder used. This burning sensation, however, lasts but a few seconds and is quickly followed by a sense of comfort. If the parts be now inspected it will be found that their redness and congestion has in a great measure disappeared. More antipyrin may now be thrown upon the laryngeal mucous membrane if it be thought necessary. When a large amount of antipyrin is thrown into an exceedingly sensitive larynx, it produces the same effect as any other powder: violent cough, sometimes even spasms of the rima glottidis of short duration, gagging and even vomiting: so that the powder is expelled before it has had time to dissolve in the secretions and produced an analgesic affect. It is well, therefore, where the larynx is exceedingly sensitive to at first throw into it only a small quantity with extreme gentleness and after an interval a larger quantity.

Case V.—A recent graduate of the medical department of the University of Pennsylvania, pale, thin, overworked, and with a family history of tuberculosis. Had suffered with hypertrophic rhinitis and chronic pharyngitis for years. August 21st, 1891, he contracted a severe cold, but remained untreated for over two weeks, at the expiration of which time he came to my office for examination and treatment. In addition to the ordinary symptoms resulting from severe coryza, he complained of dysphagia. Not only was swallowing difficult and painful, but two or three mouthfuls of water swallowed rapidly would often produce vomiting. His voice was toneless and almost whispering. Talking for a few moments was exceedingly fatiguing and caused sharp pain shooting from the larynx up the posterior pharyngeal wall, while at the same time the eyes became suffused and the voice husky. During the previous two weeks he stated that he had lost sixteen pounds in weight. He was exceedingly alarmed as to his condition, and said, "if this is phthisis, I should like to know it." Taken in connection with his general appearance and family history the existence of such a cause for the condition of affairs was by no means improbable. The mucous membrane of the soft palate

† Revue de Laryngology, D'Otology et de Rhinology. Jan. 15th, 1891.

‡ Ance titre l'antipyrine est caustique et produit une sensation de brulure tre vive, mais oui disparait au bout de queloe secondes.

was anæmic, especially at the junction with the hard palate; but not of the ashy gray color peculiar to phthisis. The oro-pharynx was moderately congested and had upon it several patches of swollen and inflamed papillæ. Both arytenoids were swollen and red, but did not present the œdematous appearance characteristic of laryngeal phthisis. The suppra-glottic mucous membrane was reddened and the cords moderately congested. The left cord seemed to move more sluggishly than the right. It will scarcely advance the purpose of this paper to describe the condition of the parts above the oro-pharynx, or dwell upon the constitutional treatment, except to state that he took one-thirtieth of a grain of strychnia three times a day. At his first visit, cocaine, antipyrin and menthol were applied to the nasal mucous membrane in the manner already described. The swollen and inflamed follicles on the pharyngeal wall were touched with a solution of nitrate of silver, one drachm to the ounce of water, and the pharyngeal wall covered with antipyrin by means of the powder-blower. Antipyrin also was thrown gently upon the supra-glottic laryngeal mucous membrane. This treatment, as far as the larynx and pharynx was concerned was repeated daily during the first week; every other day during the second week, and at longer intervals during the third week. Referring to the notes of his case which the doctor kindly placed at my disposal, I find the first application of antipyrin gave complete relief as to the dysphagia, and rendered talking much easier. This relief lasted for about six hours, but that the benefit from each subsequent application persisted for a longer period. At the end of the first week his dysphagia and dysphonia had disappeared entirely, and hence the visits to my office at less frequent intervals during the second and third weeks. During the three weeks that he has been under observation, his general health has steadily improved and he has regained six pounds of the sixteen lost during the first two weeks of his illness. At the present writing his condition is about that previous to his last illness. He is still anæmic and somewhat weak, his voice is somewhat feeble and inclined to be "squeaky," as he describes it at times; but he thinks that it is constantly improving in this respect. It is a matter of regret that the requirements of his profession prevent his enjoying the advantage of an interval of rest and recreation in the country, and certain hygienic measures, the value of which we both appreciated. Certainly, under the circumstances, the improvement in the local symptoms, at least, must be attributed largely to the applications of antipyrin.

Locally, antipyrin has also been used with marked benefit in several cases of advanced tubercular laryngitis and pharyngitis; and syphilitic pharyngitis and laryngitis; but it seems needless to lengthen this article by detailing these cases. In all cases of inflammation of the mucous membrane of the upper respiratory tract that I have been called upon to treat, antipyrin used in the manner described has seemed to give good results as a local analgesic and anti-spasmodic whose effects could be maintained for a long time if applied at sufficiently frequent intervals.

418 S. Nineteenth St., Phila.

SUFFERING FROM OVARIAN TROUBLE. *

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I chose this subject, not so much to air any knowledge I may possess, as to elicit discussion and the report of cases from those present who are particularly interested in gynæcological work, and to give briefly some of the mistakes I have noticed frequently made in the diagnosis of ovarian disease, either from ignorance or carelessness, or both.

I trust that the grouping of some of these errors collated by those especially interested in gynæcology, and presenting them collectively will have some tendency to diminish the carelessness and ignorance too apparent in this branch of medicine.

I do not claim infallibility for this Section, but we who devote most of our time to this line of work have not only the right to express our opinions concerning it, but it is also our sacred duty, both to our brother practitioners and to our patients.

Grave injustice is done our profession by incorrect diagnosis: Drs. A., B., and C. examine a patient; Dr. A. gives one opinion, Dr. B. another, and Dr. C. still another; the result is the patient loses faith not only in these three physicians, but in the profession at large, and it is brought into disrepute in the eyes of the public.

I ask for correct diagnosis for a still higher

* Read before the Michigan State Medical Society, June, 1891.

season, the welfare of the patient. To express an opinion that a disease exists when it does not, often entails a long, expensive, tedious course of treatment, and much mental anguish without any return, while to allow the disease to progress to an advanced stage, undiscovered, may prove even more disastrous.

I believe in honesty in the practice of medicine as well as in other professional or non-professional work, and we should not diagnose after a very hasty and superficial examination, "ovarian trouble," "ovarian disease," "ovaritis," or "ovarian tumor." An opinion should be withheld unless we have exhausted all means to inform ourselves both from a positive line of procedure and by a process of differential exclusion. Without these, we are all apt to make grave errors, and sometimes even with all these precautions.

I have seen many patients, both in my hospital and in my private practice, who have been blistered time and again for "ovarian trouble," because they had suffered from pain in the side, many of them, as they said, had felt their ovaries, when swollen, high above the ilium, and some of them by the assistance of their physicians.

As illustrations of careless diagnoses, I will cite a few cases: Last fall, a patient from Illinois consulted me on account of ovaritis and "rheumatism" of the right leg; she had been advised by a physician to go to Mt. Clemens and take mineral baths for her general "rheumatic" condition. Suspecting pelvic disease, with the aid of my assistant, Dr. Lynds, I made an examination; we found a large malignant growth involving nearly all of the pelvic structures; the patient died two months later, as a result of the same.

A few weeks later, at my clinic, we examined a patient from the Upper Peninsula who had been blistered for ovarian neuralgia and had received much treatment for "rheumatism" of the left leg, and œdema of the same. She finally went to a neighboring city to consult a physician who had devoted considerable time to gynæcology; he examined the patient and pronounced the "rheumatism of the leg" cancer of the uterus and appendages. She came to me, hoping for relief. I confirmed the diagnosis of the last physician and, as the disease was too far advanced for operative procedure, she returned home to die.

I might relate several similar cases that have come under my observation in the Hospital clinic as the hospital staff can testify. Among my private patients I have examined two such within a month. I have learned to look with suspicion upon "rheumatism" and œdema of one limb.

To illustrate another class of incorrect diagnosis from carelessness, etc.: Mrs. B., from Indiana, entered the Hospital February 10, 1890. She was very nervous and debilitated, and her bowels were obstinately constipated. An examination revealed a retroverted uterus without adhesion, but no evidence of enlargement or inflammation of her ovaries for whichshe had had long continued treatment. Tonic laxatives and general tonics were prescribed, the retroversion treated, and patient left the hospital April 8th, much improved.

Another patient, Mrs. P., aged 48, entered the Hospital April 29, 1890. For several years she had noticed an enlargement of the abdomen and experienced a dragging sensation in the left side. Her physician diagnosed an ovarian tumor, and advised an operation. One year previous to her entering the hospital, she had a chill, followed by fever and soreness in the side. The same physician then gave the opinion that she had inflammation of the pedicles of her ovarian tumor. An examination revealed a disc of adipose tissue in the abdominal walls so often found, at or near, the time of menopause. There was no dulness on percussion, no enlargement ex cept from fat, and everything was negative by bi-manual examination. The patient went home much relieved. A letter from her recently informs us that the relief has been permanent; she had worried much over the thought of a serious operation.

A patient came to me from the central part of the State in April last, for an examination. I noticed from her anxious expression, as soon as she entered my consulting room, that she was much troubled. When I attempted to get a history of her case, she became so nervous that she could scarcely speak. She said she had suffered frequently since the birth of her last child (seven years ago, when she had a pelvic inflammation) from pain on both sides; she also gave a history of dysmenorrhœa, menorrhagia, and of more or less pain during locomotion. She had consulted a physician in her city, who, after a hasty examination, said her condition was suspicious, and perhaps her disease was of a cancerous nature. On examination, I found a plastic deposit binding down a somewhat retroverted uterus; and in the cervical canal, near the external os, was a sub-mucous fibroid the size of a cherry with considerable erosion

about the end of the cervix, but the cervix was soft and the canal patulous, wholly unlike their condition with cancerous infiltration. A few days later, with the help of my assistant, the little tumor was easily removed. Word from her husband, a few days after the operation, was, "My wife is ten years younger and much more than that, happier."

Not long since a physician told me that he had removed several ovarian tumors the size of a goose egg by rubbing on the skin over the ilium an ointment, which he prepared for that purpose. He has had a large general practice and believed implicitly in his diagnosis of these cases and the efficacy of his ointment, although he had made but a half dozen vaginal examinations in twenty-five years, except at confinements.

The following cases will illustrate of how little value blistering and the use of ointment, liniments, etc., are in certain cases; in fact, how fruitless all treatment under certain conditions except operative procedure.

Mrs. C., age 31, married and had borne three children, was brought to the Hospital on a stretcher, from the western part of the State. Since the birth of her last child, four years ago, she had not been well, but for three years, she had had irregular menstruation, each period was from nine to thirty-eight days, and accompanied by severe pain. She had suffered all the time, but during her periods the pain in her ovaries was so intense that she was often deranged. She had been treated almost constantly for three years but without benefit; the patient said, "I would rather die than live in my present condition." I examined her November 14, 1890, and found the right ovary and tube prolapsed into Douglas' cul-de-sac, and somewhat immobilized by adhesions and extremely sensitive; the left ovary in its normal position but irregular in outline. On November 21, 1890, I operated on her, assisted by Dr. Lynds and my hospital staff, in the presence of the medical class and several physicians, as were the other patients I shall report under this head.

I found the right ovary and tube in the cul-de-sac, and the ovary bound by its distal end to the uterus and several other adhesions "glueing" the parts together. I broke up the adhesions and removed the tube and ovary as the tube was distended and the ovary contained many cysts; the left tube and ovary were removed for the same reasons. The patient made an uninterrupted recovery, she frequently said during convalescence that she suffered much less pain and of a different character than previous to the operation. She left the hospital December 20, 1890, free from pain and feeling well and happy. Several letters received from herself and her physician since her return home contain exceedingly favorable reports. She had for three months previous to coming to the hospital been confined to her bed, and, as I said, was brought to the Hospital on a stretcher. The next Sunday after reaching home, she walked to church and is now doing most of her own work.

Another similar case, Mrs. D., age 26, and the mother of two children, ages two and four respectively. She gave a history of suffering dating back ten years, when she was thrown from a sleigh and injured in the right inguinal region; since that time she had suffered from dysmenorrhœa and many nervous derangements, but nearly all the pain was in the right ovarian region. In fact about the only time she had been even comparatively free from pain was during her first gestation. After the birth, she was worse than before; she had been confined to her bed much of the time and when up she was unable to do any work. She had been in the hands of eight or ten physicians and had received much treatment of the uterus, had been blistered scores of times, and had, as she expressed it, "taken a drug store of medicine." They had spent all of their means trying to cure her. Through the kindness of her home friends, she was enabled to come to the University Hospital. She entered December 5, 1890, with every feature indicating suffering. She was much reduced, her general condition was bad. I found the uterus slightly enlarged and some endocervicitis. Both ovaries with irregular outlines and enlarged; the right ovary and tube were bound down and extremely sensitive.

I decided to make an exploratory operation after an attempt to improve her general condition. On February 10, 1891, the patient having become somewhat stronger, I operated on her. At that time she was ready and anxious for the operation. The ovaries and tubes were "glued" together and bound down by adhesions. After breaking up the adhesions, I removed the enlarged tubes and cystic degenerated ovaries. The ovarian tissue proper was small in amount, but the ovaries contained several cysts ranging in size from that of a pea to a large cherry. The operation, like

the others, was done under full aseptic precautions. She suffered but slightly from shock, did not vomit once, and the same evening, she said the old pain was gone. The only complaint was of some smarting along the line of the abdominal incision. Her temperature and pulse were normal four days after the operation. She made a rapid recovery, and left the hospital March 20th in excellent condition.

I wish to report another somewhat similar case that has not made a rapid recovery. Mrs. P. entered the Hospital January 6, 1891. She gave a history of suffering dating back to 1885, when she had an abortion. She complained of severe pain in both ovarian regions all the time. She had been treated by many physicians and they had spent all their means on physicians without the least benefit. An examination revealed a tumor in the right broad ligament, the tubes both greatly enlarged and all the parts painful to touch. I advised an exploratory operation with the understanding that I was to do what was indicated after abdominal section. I operated on February 24, 1891, and found a cyst of the right broad ligament, twice the size of the uterus; both tubes were twenty or twenty-five times the size of their normal diameters and greatly lengthened. There were many and large adhesions binding the parts together, and to the other pelvic structures.

After long and tedious work, I succeeded in liberating the tubes and ovaries which I removed together with the cyst of the broad ligament. Not much blood was lost and notwithstanding the operation was over two hours in length she suffered but little from shock. The patient felt so well after three days that she was determined to move about in bed without the assistance of the nurse. Contrary to orders, she would rise in bed, grasp the top of the bed, and draw herself up. Every precaution was taken to prevent it, but she persisted in violating our directions. The first trouble was a stitch abscess, followed by another. After four weeks there was evidence of deeper suppuration. A vaginal examination located it in the cul-de-sac. I evacuated it per vaginam. Since that time, she has been doing much better, but is not making a rapid recovery.

Another patient, Mrs. H., entered the Hospital October 7, 1890. She had suffered from much pelvic pain for fifteen years which began with an acute pelvic inflammation and had been repeated many times. She suffered intensely at the time of her periods. She had also taken much medicine and had been treated by many physicians, regular, irregular, and all kinds of quacks without any relief; in fact growing worse from year to year. She came to us a physical wreck in every sense.

Th examination was unsatisfactory. Irregular and indefinite masses were found in both sides of the pelvis and quite immovable. I could not outline anything definitely. I decided to operate with the hope of removing the ovaries and establishing an early menopause; to which the patient and her husband readily consented, but both said, after hearing the probabilities discussed, that I should make an exploratory operation, and if the tubes and ovaries could be removed without much danger, I should remove them, but if not, to close up the wound.

After opening into the abdomen, I found such masses of adhesions binding together the ovaries, tubes, uterus and intestines, I saw I could not proceed further with any degree of safety and without violating my agreement with the patient and her husband, so I closed up the wound. She made a rapid recovery from the operation and was soon in the same condition as before.

I would like to report one more case, Mrs. B., age 29, and mother of six children, entered the Hospital March 26, 1891. For four years she had suffered from a tumor which began in the right inguinal region; she complained especially when on her feet much as the tumor then dropped down more into the pelvis and disturbed the pelvic organs. Sometimes the pain was equal to that of childbirth and at times she had convulsions. She had applied many things externally as advised without benefit. Last fall a physician urged her to go to my clinic.

An examination revealed a freely movable tumor in the abdomen, the upper part of which, when the patient was on her feet, was as high as the uterus in the fifth or six month of gestation. It was so regular in outline and so firm that I considered it a fibroid with a long pedicle. The patient was ready and anxious for an operation and I operated on April 2, 1891, and removed the tumor, which was attached by a long pedicle to the right tube and ovary. It proved to be a dermoid tumor and contained a large mass of bone, much long hair, and considerable fatty material. It measured 22 inches in one circumference and 16 inches in other. Patient's temperature did not go above 100°, nor pulse above 86 after the operation. She made a splendid recovery and left the Hospital May 16th, perfectly

free from pain and in an excellent condition in every sense.

Not even the best ovarian tumor resolvent applied faithfully over the abdomen could have removed this growth. I confess I have not sufficient faith in the contiguity of the abdominal applications to remove pelvic growths. I might report other cases, but these will illustrate this part of my paper. There are several in this section who can duplicate these. They all forcibly illustrate that without proper diagnosis and surgical treatment, we cannot hope to benefit this class of cases.

I do not wish to convey the idea that I advocate abdominal operations without good reasons for so doing. The reckless laparotomies, as practiced by some, I denounce, as I do reckless work in any branch of medicine. Those who have been thoughtful and conscientious enough to investigate the results, and especially the ultimate results of these operations must have concluded that they mean much more than abdominal incisions, removal of tumors, ovaries, tubes, etc., stitching up the wound and getting the patient back to her bed alive.

1. Some patients are benefited or cured.
2. Some remain as bad as before.
3. Some are made worse.

By properly selecting the cases, the first class can be increased, and those that come under the other divisions can be diminished. Such cases, if possible, by careful and thorough investigation should be decided according to the best interests of the patient, and not according to the wishes of the one desirous of making a reputation as an operator. There is often a great difference between an operator and a surgeon. I believe that many patients are subjected to laparotomies who might be cured by other and less severe means; but some conditions demand operations. As to my views of the general to the local diseases of women, I refer the hearers to my address of last year before this society. I make no plea for a new method of my own of making correct diagnosis, but earnestly ask for a closer adherance to and observance of the well established ones. A good history of a case often throws much light upon it.

For examination, the patient, should be placed in the dorsal position, her shoulders slightly elevated and limbs flexed; she should be in a warm room, and on a firm bed so that her hips will not sink down into the bed; the clothing should be perfectly loose; the rectum and bladder emptied and the examiner's hand should be warm. I have found an anæsthetic an invaluable aid in difficult cases in diagnosing diseases of the ovaries, tubes and ligaments. I have examined a good many patients when it was impossible to make a satisfactory examination without it. A great many, I believe, in examining these cases pass the finger too far anteriorly and thus do not reach the ovaries, tubes, and all parts of the uterus. When the parts are relaxed by an anæsthetic, there is little difficulty generally in making a satisfactory examination.

If I were to answer the question, "How often is it necessary to anæsthetize patients for examination?" I would reply, as often as we find those that we cannot thoroughly examine without it, or else we should not express opinions upon their conditions.

I have mentioned no names of physicians, patients or places. I did not write this paper to make personal attacks upon any physicians, or embarrass any patients; only to set up a few guide posts that I trust will keep some on the same road, and I expect a good many in this section will set up other guide boards that will help to keep me from straying from the right path.

CHRONIC INFANTILE GASTRO-ENTERO-COLITIS. *

BY A. S. MAXSON, M. D.,
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I have a rare case of chronic infantile gastro-entero-colitis worthy of consideration. The individual was an infant born one month prematurely. At the time of birth it weighed three pounds and six ounces; and appeared like a miniature grandmother with shriveled skin drawn over its tiny bones and a very large head and abdomen as compared with the balance of its body.

The infant was put to the breast as usual, but the milk was vomited and purged, soured and in hard curds, the passages soon turning green except the curdled milk which remained white. This condition was sought to be remedied by bismuth, chalk mixture, pepsin, with and without acids, and similar remedies, but of no avail until a change of diet was made to dextrine, when the passages soon appeared tolerably well.

Since the dextrine would not nourish the infant sufficiently, it was put back to the

* Read before the Central Wisconsin Medical Society, September, 1891.

mother's breast with a simular result to that above. The baby was perfectly wild to get anything that it could drink. From dextrine mixtures to breast and back again in a vain effort to make the baby assimilate its mother's milk, it was changed for four weeks.

Now, it was tried on various nourishments, with the following results: Cow's milk diluted with two parts water and lime water, or cow's milk mixed with dextrine disagreed with it. In foods containing cow's milk in its natural form the milk would be vomited, curdled and soured, or appear as curds in the passage, though but a teaspoonful of milk was added to the food. Cow's milk with pepsin acted like clear milk. Pancreatonized milk would curdle enough to make trouble unless the digestion was so nearly completed as to be bitter, in which case the infant soon tired of it and refused it. Whey and cream afforded an incomplete nourishment. Strippings from cow's milk diluted with three or four parts of water and lime water acted much the same as milk. Condensed milk agreed for a short time until thrush appeared, which could not be controlled until the child was taken from this food. Oatmeal gruel, strained, fermented readily in its bowels. Dextrine did not nourish it. Wells and Richardson's baby food, and especially Horlick's food, fermented in its bowels. Reed and Carnrick's soluble food agreed with the baby, but did not nourish it well. Still it did the best of anything tried. Later a cow's milk was found that agreed with it for a short time. Thus we worried along, going from one food to another. The course of the disease was not constant, but every two or three weeks the baby would reach a climax. Her breath took on a peculiar, musty odor, and in a few hours she vomited and purged decomposing food with much mucus for twenty-four to thirty-six hours; then she was a week recovering from a subacute gastro-intestinal inflammation.

In the outset of these exacerbations calomel, rhubarb, turpeth mineral, ipecac, or any drug tried did no good, but hastened the attack. However, after the vomiting, Squibb's bismuth in large doses, twenty grains every two hours, quickened recovery and checked the secretion of mucus. The fermentation in the bowels with diarrhœa at other times, was helped by corrosive sublimate. Thus with great care in dieting, the child passed four and one-half years, scarcely a month elapsing without an exacerbation culminating in vomiting and purging of food and mucus, followed by a subacute inflammation of its stomach and bowels. At last a remedy was found which terminated this condition from the beginning of its use. This remedy was *powdered myrrh*, given in divided doses of from nine to twelve grains a day, either in capsules or mucilage of acacia with glycerine and liquorice.

SHOCK, FOLLOWING CONTUSION OF THE ABDOMEN, CLOSELY RESEMBLING CEREBRAL CONTUSION, WITH REPORT OF A CASE.

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RESIDENT SURGEON PENNSYLVANIA HOSPITAL, PHILADELPHIA.

Contusions of the abdomen unattended by lesions of the viscera are rarely fatal; yet it is possible for rapid death to follow such injuries either from concomitant shock or from a condition of the solar plexus analagous to cerebral contusions.

Case.—Frank S.—age 10, was admitted to the Pennsylvania Hospital during the service of Dr. Morton, Oct. 1, 1891, with the following history: While engaged in jumping with some other boys he slipped and fell against one of the corners of a large box of dry goods, striking his abdomen in the epigastric and umbilical regions. On admission to the hospital his condition was one of considerable shock. He seemed very dull and stupid and could be aroused only with great difficulty. His pupils were normal; temperature, 97; pulse, 54, slow and full; and respiration, 20 per minute. He lay curled up upon his side and complained of pain in his abdomen in the umbilical region. Shortly after admission he vomited. There was no history of head injury and there were no symptoms present to indicate any injury to the abdominal viscera. In fact his general condition resembled strongly a case of cerebral concussion. Temperature 3 hours after admission was $99\frac{2}{5}$; pulse, 74; and respiration, 20 per minute. His treatment was rest in bed; clothes dampened with lead water and laudanum applied to his abdomen, and milk diet. His bowels were moved by a single enema. On the following day his temperature, pulse and respiration were normal, and all that he complained of was slight soreness in his abdominal muscles. All symptoms of shock had disappeared and he was discharged from the Hospital cured.

Society Reports.

AMERICAN ORTHOPEDIC ASSOCIATION.

FIFTH ANNUAL SESSION, HELD AT WASHINGTON, D. C., SEPTEMBER 22ND, 23RD, 24TH, AND 25TH, 1891.

ORTHOPEDIC SURGERY AS A SPECIALTY.

Dr. A. B. Judson, of New York, in the President's Address, said that orthopedic surgery is specially the domain of physical demonstration, where subjective symptoms give place to objective signs, where treatment is chiefly mechanical, and where results are recorded in degrees of a circle, and fractions of an inch. It exists and thrives as a specialty, because the general practitioner concurs with the public in committing patients who, from the nature of the case, generally recover with some deformity and disability to the care of experts.

Dr. N. M. Shaffer, of New York, defined orthopedic surgery as that department of surgery which includes the prevention, the mechanical treatment, and the operative treatment of chronic or progressive deformities, for the proper treatment of which special forms of apparatus or special mechanical dressings are necessary.

Dr. V. P. Gibney, of New York, proposed a definition as follows: That department of general surgery which includes the prevention, the mechanical treatment, and the operative treatment of chronic or progressive deformities.

ORTHOPEDIC NOSOLOGY.

Dr. W. R. Townsend, of New York, advised the construction of a uniform nomenclature for orthopedic affections to facilitate the taking of histories, and to increase the value of reported cases. A committee was appointed for this purpose.

THE LATE MR. THOMAS.

Dr. A. J. Steele, of St. Louis, paid a friendly tribute to the late Mr. Thomas, of Liverpool, a corresponding member of the Association, whose methods have been so widely discussed and whose influence is felt in many branches of orthopedic practice.

CRURAL ASYMMETRY AND LATERAL CURVATURE.

Dr. H. L. Taylor, of New York, described two instances in which the leg was two inches, and one and one-eighth inches short, respectively. Both cases were in young women. The short limb was larger and stronger, the shortening was chiefly below the knee, and there was no lateral curvature.

Dr. A. Hoffa, of Wurzburg, Germany, described a specimen which proved that in one instance the shortness was due to union of the neck and shaft of the femur at an acute instead of an oblique angle.

Dr. F. Beely, of Berlin, illustrated with specimens of lateral curvature and ingenious models, the changes which occur in the bodies of the vertebræ preceding rotation, explaining how the paraspinous sulous is shallow and broad on the concave, and deep and narrow on the convex sides, a condition which is reversed in the lumbar region by the absence of ribs.

SPINA BIFIDA AND CLUB-FEET.

Dr. H. A. Wilson, of Philadelphia, related the case of a child of four years. The ordinary methods of reducing the deformity of the feet excited suppuration, which resisted treatment for six months, as long as the patient remained under observation. There were sensory paralysis and deficient circulation in the lower extremities. The same intolerance of surgical treatment thwarted all attempts to treat the spinal tumor.

Dr. L. A. Weigel, of Rochester, had had similar trouble with a similar case, but found that when the child was older, it was possible to treat the deformity of the feet with success.

Dr. A. E. Hoadley, of Chicago, related a case of spina bifida, in which good results had followed an operation in which he did not attempt to repair the vertebral deficiency, but had simply turned up large flaps, and united them by silk sutures.

Dr. T. M. L. Chrystie, of New York, reported a case of congenital equino-varus, with absence of great toe and contiguous bones of the instep. Mechanical treatment speedily reduced the deformity, with a gain of symmetrical gait.

Dr. W. E. Wirt, of Cleveland, related an interesting and unusual case of club-hand and club-foot, with other congenital malformations.

Dr. Hoffa said it was evident that all cases of club-foot do not have the same causation. The cases reported were due to some fault in the earliest stages of development.

SPASTIC PARALYSIS AND SPINA BIFIDA.

Dr. W. N. Bullard, of Boston, reported a successful operation by Dr. C. L. Scudder, of Boston, for the relief of spastic paraplegia in a child with spina bifida. He thought the paraplegia was not due directly to the spina bifida, but to the accompanying hydrocephalus. He advocated electrical treatment, and faradization, rather than galvanism.

Dr. Weigel reported a case in which division of all shortened tissues, and the use of a brace, had secured a favorable result.

DEFORMITY AFTER KNEE-JOINT EXCISION.

Dr. J. C. Schapps, of Brooklyn, said that after excision the two united epiphyses make a mass of soft bone in each end of which is inserted a long lever. With this leverage, it is possible to restore and maintain a straight limb by simple mechanical treatment.

Dr. A. M. Phelps, of New York, thought that recurrence of deformity can be prevented by liberal resection of the hamstrings.

Dr. Hoffa said that relapse often occurs from incomplete removal of diseased tissue, and that when excision is done in early life, and all disease removed, marked shortening will not occur.

Dr. Beely said that flexion could be prevented by over-correction, but at the risk of further over-correction as the result of locomotion. Apparatus designed to prevent recurrence of deformity should relieve the limb from the weight of the body.

Dr. Taylor objected to free division of the hamstrings, as these muscles are useful in balancing the pelvis on the femur, even after motion at the knee is abolished.

Dr. J. D. Griffith, of Kansas City, had prevented flexion by removing all the disease and without dividing the hamstrings.

Dr. Schapps said that in many patients under ten years, excision was to be preferred to mechanical treatment.

KNEE TROUBLES IN LOCOMOTION.

Dr. Shaffer related a number of cases in which an elongated patellar ligament had caused pain and difficulty in locomotion.

Dr. A. M. Vance, of Louisville, thought that the ligament might become shorter if not constantly stretched by use. Rest was indicated.

Dr. Gibney cited a case in which rest for one-and-a-half years had not caused shortening.

Dr. Shaffer said his patients had been benefited by giving lateral support, thus converting the joint into a true hinge.

ATROPHY IN JOINT DISEASE.

Dr. E. G. Brackett, of Boston, argued that atrophy is due to disease and not entirely to reflex irritation.

Dr. A. G. Cook, of Hartford, said that atrophy of the foot, often very marked, can be only the atrophy of disuse.

Dr. J. K. Young, of Philadelphia, believed that the atrophy in question is the result of reflex interference with nutrition. In hip disease, it appears first in the thigh muscles, especially the adductors.

ATROPHIC ELONGATION.

Dr. Roswell Park, of Buffalo, described the atrophic elongation conspicuous in the lower extremity. As the result of disuse from disease, with avoidance of pressure on the bone ends, the bone lengthens more rapidly than its fellow. This is illustrated in growing children with disease of the tibia or femur, and is noticeable in some cases of hip disease.

TREATMENT OF HIP DISEASE.

Dr. Phelps said that traction and fixation should be enforced to prevent destruction by intra-articular pressure. Ankylosis is the result not of fixation, but of disease. The patient should be put to bed from three weeks to four months, and should then wear the lateral traction fixation splint which was exhibited. Children under three years are placed in the plaster-of-Paris portable bed, which was also shown.

Dr. Wirt exhibited a new device for traction, in which the force of the lever is changed into rectilinear instead of circular motion, without key, screw-driver, wrench, buckle, or strap.

Dr. R. H. Sayre, of New York, said the invention gave accurate and easy adjustment in the direction of traction, but in the direction of relaxation, the control was defective.

Dr. A. J. Gillette, of St. Paul, was satisfied with the results obtained by the use of Thomas' splint.

Dr. Vance said he practiced fixation at the hip, but believed much depended on the surroundings of the patient.

Dr. Shaffer believed the best results can be obtained by the use of the long Taylor traction splint. He thought results should not be reported till six years had passed, as relapses were not uncommon.

Dr. Ridlon, of New York, said a splint

should secure immobilization by antero-posterior leverage, as in Thomas' splint, by an action identical with that of the Taylor spinal brace.

Dr. Stelle approved of the combination of the English method of rest with the American plan of traction.

Dr. Taylor practiced rest in bed with traction in the acute stage, to be followed by a splint which allows locomotion.

Dr. Sayre thought but few cases required lateral traction. When the inflammation had ceased, he applied passive motion. If the pain and tenderness following, last more than twenty-four hours, the passive motion had not been rightly used.

Dr. E. M. Moore, of Rochester, believed that a joint only *moderately* inflamed, demands motion. He employed traction with a certain amount of motion.

CONGENITAL DISLOCATION OF THE HIP.

Dr. Phelps exhibited apparatus for the treatment of this affection, and described his method, and its results.

Dr. E. H. Bradford, of Boston, had modified the apparatus in previous use by adding an appliance with which the patient is allowed to walk about. The joint is thus protected as in convalescence from hip disease. Those appliances he had made of aluminum for the sake of lightness.

Dr. C. C. Foster, of Cambridge, said the best recorded result had been obtained by Dr. Buckminster Brown, whose patient was treated by mechanical means in bed.

Dr. A. Hoffa had operated by deepening the acetabulum, which is practicable from the thickness of the pelvis at this point. At first, he sawed a periosteal flap over the trocharter, but this is unnecessary. Two months ago, he examined his first case, two years after the operation, and found a movable joint, freedom from the characteristic gait, and absence of lordosis.

Mr. Howard Marsh, of London, divided these cases into, (1) Those in which the bone slips about on the wall of the pelvis, and (2) Those in which it is fixed. The majority belong to the second class, and in these, operation is useless, but is more properly applicable to those cases of the first class in which the head is high up and movable. The anterior position is the most favorable, because lordosis, which depends on the backward displacement of the head of the femur, is absent.

Dr. Ridlon said that, as subjects for treatment, anterior dislocations are more hopeless than posterior ones.

Dr. De F. Willard, of Philadelphia, said treatment should be by forcible attempts at reduction, to excite inflammation, followed by traction and systematic exercise.

MALIGNANT DISEASE AND POTT'S DISEASE.

Dr. Judson reported three cases in which Pott's disease and malignant disease of the vertebræ had been confounded by himself and other observers. In one, the diagnosis was made ante-mortem. The patients were four-and-a-half, thirty-five, and forty-two years respectively. The chief diagnostic points are, (1) Deformity present in Pott's disease, absent in malignant disease; (2) Local disability, and (3) Local pain, both absent in Pott's, and present in malignant disease.

Dr. Willard had seen two cases in which his diagnosis was confirmed post-mortem.

Dr. Gibney reported a case in a man of forty years, in which he and others had been baffled in diagnosis. There was sarcoma of the fifth and sixth cervical vertebræ.

Mr. Marsh related the case of a child which was extremely difficult to diagnosticate, and which proved to be malignant in character.

SYPHILITIC POTT'S DISEASE.

Dr. Ridlon said that in this form, the onset is more rapid, the pain and disability greater, the kyphosis sharper in outline, and abscesses often appear before deformity. If recognized lesions of hereditary or tertiary taint are present, treatment should be by large doses of mercury and iodide of potassium.

Dr. B. Lee, of Philadelphia, referred to cases of this origin, which had come under his observation.

POTT'S DISEASE IN THE OLD.

Mr. Marsh had observed instances of suppurative tuberculosis in the metacarpus, tarsus, testis, cervical glands, knee and hip in eight patients between sixty-three and seventy three years. But senile tuberculosis of the spine is most rare. He had seen two cases. The patients were sixty-four and sixty-five years respectively. The College of Surgeons of London possessed an osseous specimen of the action of senile tuberculosis of the upper cervical vertebræ. In his "Studies of Old Case Books", Sir James Paget had recorded a case of Pott's disease in a gentleman of fifty-five, attended with angular curvature.

Dr. Sayre recalled the case of a patient,

age, fifty-five, who recovered from Pott's disease with paraplegia and abscesses.

POTT'S DISEASE AND PREGNANCY.

Dr. T. H. Myers, of New York, had collected twenty-five cases of labor in fifteen patients recovered from Pott's disease. In no instance, did caries recur. But of seven cases in which the disease developed during pregnancy, three died, and three were left paraplegic. Normal parturition often follows in cases of deformed pelvis whose measurement would indicate that it was impossible. These patients should be examined by the obstetrician early in gestation.

Dr. Taylor knew of many cured patients whose marriage had been followed by the birth of healthy children.

Dr. G. W. Ryan, Cincinnati, thought it was a question of allowing the tuberculous to marry. He knew of married women deformed by Pott's disease, who had borne and raised healthy children.

Dr. Steele said one of his patients recovered from Pott's disease and had borne six healthy children.

Dr. Lee said that one of his patients with a large lumbar kyphosis, had borne twelve children who, with the mother, are all in good health. He thought Pott's disease, even in the lumbar region, rarely produced narrowing of the pelvis.

Dr. Vance had seen a number of cases in which this deformity had not made labor of more than average difficulty.

PARAPLEGIA IN POTT'S DISEASE.

Dr. Brackett said that relief from paraplegia may be confidently expected from continuous extension and fixation, even in cases of eighteen months' standing. This should be continued for some time after recovery.

Dr. Young reported two cases of complete recovery, in which there had been absence of sensation, a feature always of grave import.

Dr. Shaffer referred to a case in which the autopsy showed that a portion of the eighth dorsal vertebra had nearly cut through the cord, leaving but a slender thread.

Dr. Hoffa said that in these cases, the spine should be put absolutely at rest. He had collected thirteen operations within the vertebral canal. Two died at once, two recovered, and would perhaps have done so any way. In the others, there were immediate good results but relapses soon occurred. The operation has no great future before it, and should be limited to those cases in which the processes alone are affected.

Dr. S. Ketch, of New York, had now under treatment a patient who had been paraplegic for five years, but he still maintained a hope of effecting a recovery.

Dr. Hoffa suggested that an abscess may be exerting pressure on the cord.

Mr. Marsh said paralysis rarely depends on the pressure of the abscess; but (1) On softening of the cord, (2) Pressure of a displaced sequestrum, and (3) Most common, on pressure from exudation. He would only operate after thorough trial of rest.

Dr. Willard said he could not absolutely diagnosticate the cause. When there are extensive inflammatory deposits about the arches, laminectomy may relieve the posterior pressure and allow expansion of the cord.

Dr. Lee said that in all cases of this form of paraplegia, suspension would materially hasten recovery.

ABSCESSES IN POTT'S DISEASE.

Dr. Townsend thought that, as a rule, these abscesses should not be opened. In some cases, aspiration should be done, and in others, the cavity should be opened and drained to prevent sepsis and danger to life. His views were based on the history of 380 patients, 75 of whom had abscesses.

Dr. Young suggested the division of lumbar abscesses into external and internal, according to their relation to the psoas fascia.

Dr. Vance advocated aspiration, repeated as often as fluid is detected. In this way he cures 3 out of 5 cases. The depot is thus kept small, and the extent of subsequent operations, if necessary, is limited.

Mr. Marsh had rarely obtained a good result by the use of the aspirator.

Dr. Ryan said he had found aspiration to be a poor dependence. When interference becomes necessary, he believed incision to be the most conservative and effective procedure.

Mr. Marsh said that in his observation, it is best to open freely, evacuate thoroughly, and then apply pressure to assist in closing the cavity.

Dr. B. E. Hadra, of Galveston, said that on general surgical principles, such abscesses should be evacuated.

Dr. Willard would let dormant and caseating foci alone, liquefacting collections, he would aspirate and inject with iodoform emulsion, and if true pus were present, he would incise, wash out with sublimate solution, and avoid undue manipulation which might cause fissures which would let the

tuberculous poison into the system. He would then suture the incision, and inject iodoform and boiled olive oil.

Dr. Bradford said that, while he did not think the danger from opening large abscesses was so great as had been thought by some, he was aware that absorption of such abscesses is not at all uncommon.

Dr. J. E. Moore, of Minneapolis, said the evacuation of a spinal abscess is a matter of great surgical responsibility, as it is an aseptic cavity, difficult to protect from infection after operation.

Dr. Hoffa would open only those abscesses which cause severe pain, or are likely to give rise to septicæmia.

Dr. Lee would never open an abscess of this kind unless compelled to by the conditions mentioned by the last speaker.

Dr. Ketch said there was danger that in our anxiety to treat a secondary feature, we neglect the disease itself.

Dr. Shaffer would not say that incision was never advisable, but generally it is wrong to open one of these abscesses. A very large abscess cannot be washed out, and its disappearance may be confidently expected, especially if efficient mehcanical treatment is practicable.

Dr. Myers said that it was proven, (1) That it is impossible to completely remove bacilli from the abscess cavity, and (2) That bacilli-infected wounds, at times, heal primarily. Infection is more imminent after incision, because the wound lays open channels of absorption.

WIRING THE VERTEBRAL PROCESSES.

Dr. Hadra suggested that the spinous processes at the seat of the disease be exposed and then firmly wired together to secure rest, and prevent deformity. The operation, as he had performed it for fracture of the cervical spine, was extremely simple and effective.

Dr. Sayre thought the wires would not bear enough force to remove the weight from the vertebral bodies, and that outside protection would be necessary to prevent lateral and rotatory disturbance.

Dr. Judson thought it was a question whether wiring was applicable through the long periods in which consolidation is delayed. Intolerance of the skin always prevents such pressure as we would like to make on the kyphos. The method proposed, circumvents this difficulty.

Dr. R. Whitman, of New York, said that due consideration should be given to the difference in development between the growing and adult spine.

Dr. Ketch did not see how the proposed operation could take the place of apparatus.

Dr. Moore said it was a most simple and harmless procedure, and notwithstanding the theoretical objections, he would accept the first favorable occasion to try it.

PROGNOSIS AND TREATMENT FOR POTT'S DISEASE.

Dr. Ketch had learned from 75 cured cases, that in length of treatment and degree of deformity, the upper region of the spine is most favorable, and the middle least of all, that paraplegia more frequently accompanies disease in the upper than in the lower regions, and that cases of traumatic origin recover sooner than those of tubercular origin. Sudden deaths sometimes occur in cervical caries from interference with respiration.

Dr. F. Bartow, of Buffalo, said that the earliest important sign of the dorsal and lumbar regions is lateral curvature, dependent on nervous tenderness. Apparatus should be constructed to oppose the rotation accompanying the lateral curvature, as well as the antero-posterior deformity. He used the plaster-of-Paris jacket applied to effect the above objects.

Dr. Foster said that extension in *bed* is the best method in the acute stage. Extension should be made by light weights, the cords leading over the head and foot of the bed and attached to waist-belts, chest-belts, and head-straps.

Dr. Weigel reported a case of cervical Pott's disease, with abscess and paraplegia, successfully treated by extension in bed.

Dr. Ridlon had kept patients in bed from three to four years, and had never seen a case which was not benefited generally or locally.

Dr. Ryan said recumbency was the ideal treatment, but it is in many cases impracticable. He had found split plaster jackets efficient after the acute stage.

Dr. Lee said that many years ago, when the plan had fallen into entire disuse, he was the first to adopt suspension from the practice of Dr. J. K. Mitchell. The apparatus was Le Vacher's head support and jury-mast attached to a chair or go-cart, or to a doorway swing.

Dr. Sayre said that in the cervical and upper dorsal region, a metal posterior splint supported on the pelvis should be used with a jury-mast, and the lower dorsal and lumbar regions, a plaster of Paris jacket with a jury-mast. Recumbency should be practiced in

the acute stage; children should be placed in the wire cuirass.

Dr. Ketch had been disappointed with the plaster-of-Paris and jury-mast in the cervical and upper dorsal region. He commended the Taylor apparatus and chin-piece. In the lumbar region almost any supporting apparatus will secure a good result.

Dr. Taylor said that the antero-posterior lever secures rest and protection and combats deformity. Old and neglected cases are especially amendable to treatment, just as ankylosis is later and rarer than is generally supposed. Abscesses and paraplegia do not forbid a favorable prognosis.

Dr. Bradford said that the plaster-of-Paris jacket was the readiest method, but had its disadvantages, that a stool brace gave better support, but demanded more skill and care, and that recumbency was the surest way to prevent deformity, but, as a rule, was impracticable for the long periods covered by the disease.

TYPHOID SPINE.

Dr. Gibney reported an additional case of typhoid spine, in a man of forty-five years, in which, different from the cases previously reported, there was marked deformity in the cervical region, dating back to typhoid fever at the age of twenty-two. Two years of pain and disability had immediately succeeded the typhoid attack. Usually, the symptoms had not appeared till one or two months after the fever.

Dr. Hadra recalled an epidemic of typhoid with so much tenderness on pressure of the vertebræ that the affection was at first thought to be meningitis.

RHEUMATIC SPONDYLITIS.

Dr. Ryan said that this rare affection should not be confounded with rheumatoid arthritis of the spine. It is usually accompanied by rheumatic manifestations elsewhere. In the early stage, the symptoms resemble those of tubercular spondylitis. Latter, the deformity is not angular but resembles that of senile kyphosis. Treatment should be directed to the relief of pain by support, cautery, and medication. In the chronic form, when pain has lessened, mobility should be encouraged by passive motion.

Dr. Hoadley deplored the confusion which is found in the nomenclature of these conditions which produce such a variety of results. He thought both rheumatism and osteo-arthritis were microbic diseases. If ligamentous structures interfere with motion, passive motion was proper.

Dr. Lee was reminded of a case which was at first thought to be spinal myalgia, but which proved to be gouty disease of the cartilages, an infrequent affection. Apparatus afforded relief, but of course not a cure.

Dr. Ryan said that gouty spondylitis is generally attended by manifestations in other parts of the body. He had failed to state that his patient had limited respiratory movements.

Dr. Vance related a case in which there was, in addition to the spinal affection, complete immobilization of the thorax with chiefly diaphragmatic respiration.

Dr. Bartow had seen a case in which relief was afforded by the spinal jacket.

Dr. Gillette reported a case which, at first glance, resembled the deformity of Pott's disease, but which proved to be rachitic in its etiology. Improvements followed a few days after suspension was begun.

TORTICOLLIS.

Dr. Whiteman inferred from the study of 264 cases, that torticollis was more frequent in females than in males, and that the two sides of the neck were equally liable. Acquired torticollis, being often the result of suppurating cervical glands, should be treated at first by mechanical support to secure rest and prevent deformity. Later, division of contracted parts, with careful after-treatment, should be practiced.

Dr. Hoffa said that cases of fœtal origin have immediately after birth an atrophy of the face and head.

Dr. Whitman thought that the asymmetry of the face and head was a late feature of torticollis due to muscular action on the growing bones.

SACRO-ILIAC DISEASE.

Dr. Lee said the sequence of events is as follows: (1) Injury of the synchondrosis, (2) Subacute inflammation, (3) Irritation of the nerves of the joint, transmitted to the nearest plexus, (4) Resulting pain in the sciatic. The sciatica should be considered the result, not the cause, of all the trouble. In 9 cases out of 10, neuralgia is the effect and not the cause of any trouble. As stooping in sacro-iliac disease is injurious, he had devised a handy instrument with which the patient can pick up an object from the floor while remaining erect.

ELECTION OF OFFICERS.

Dr. Benjamin Lee, of Philadelphia, was

elected President, and Dr. John Ridlon, of New York, Secretary, for the ensuing year.

SELECTED FORMULÆ.

TREATMENT OF URTICARIA.

Quinquad recommends, in cases of intermittent urticaria, quinine, but preferably arsenic. In the chronic form, baths and hydrotherapy in all forms are to be absolutely forbidden. On the other hand, wrapping the patient up in cotton batting is often excellent. Internally alkalies, arseniate of soda, etc., are indicated.

For the pruritus he advises:

℞ Aq. lauro-cerasi.....grammes l.
Chloral..... " v.
Aquæ..... " cc.
M.

Or,

℞ Ether.....grammes xxx.
Tepid water..... " lx.
M.

Also a powder for dusting on the surface:

℞ Amyli.....grammes l.
Zinci oxid., grammes x; or
Acid salicyl..... " v.
M.

When fresh outbreaks supervene, one-fourth of a milligramme of aconitine in divided doses will prove serviceable.—*La Tribune Médical.*

ANTISEPTIC GAUZE.

For plugging the uterus, Bar has employed with advantage a gauze medicated with retinol iodoform. It is used as follows: The gauze, after being boiled in a strong carbolized water and well dried, is dipped in the following mixture:

℞ Retinol.....ʒij.
Wax.....ʒjss.
Iodoform.....ʒj. M.

Tampons made with gauze, prepared in this manner, are especially useful, inasmuch as they are apt to leave a good coating of iodoform upon the vaginal or cervical surface, and thus assure complete asepsis of the mucous membrane.—*Boston Med. Surg. Jour.*

NITRATE OF SILVER IN ICTERUS.

Nieceche recommends the following prescription for catarrhal icterus:

℞ Argent. nitr.....grammes. 0.06 (gr. j).
Aqua. dest..... " 180.0 (f ʒvss).
M. Tablespoonful three or four times daily.

Dietetic regulations must not be neglected. —*Med. Chir. Rund.*

GLYCERINE JELLIES FOR THE HANDS.

The *Ch. and Dr.* gives the following formulæ:

(1)

℞ Tragacanth.....gr. lx.
Glycerine.....ʒij.
Water.....ʒiv.
Extract of rose.....gtt. vi.

(2)

℞ Gelatine.....ʒij.
Glucose.....ʒj.
Glycerine.....ʒvj.
Water.....ʒiij.
Oil of rose.....gtt. v.

TREATMENT OF SEBORRHŒA OF THE SCALP.

Liebreich employs the following prescription in the treatment of seborrhœa of the scalp:

℞ Spirits of ether.....ʒjss.
Tincture of benzoin.....ʒj.
Vanillin.....gr. ss.
Heliotropin.....gr. iij.
Oil of geranium.....gtt. ij.

Signa "For external use, combustible." —*Wiener Medicinische Presse.*

CREOSOTE PILLS.

A German paper gives the following as the best formula for making creosote pills:

℞ Creosoti.....mxc.
Pulv. rad. althææ.....gr. lx.
Calcis ust.....gr. xij.
Aquæ destillatæ.....gtt. vj--viij.

Misce et adde

℞ Sacchari albi.....gr. xc.
Boli.....gr. lx.
Ut fiant pilulæ, cxx.

—*Chemist and Druggist.*

ACETANILID AND CAMPHOR.

Cshesmiutzeff recommends that camphor be given with acetanilid in order to overcome the depressing effects of the latter. He has had good results with this combination in the treatment of pneumonia:

℞ Acetanilid.....gr. iij.
Camphor.....gr. jss. M.

For one capsule. This may be repeated in four hours.—*Boston Med. and Surg. Jour.*

GARGLE FOR CHRONIC LARYNGITIS.

Ragonean recommends the following mixture to use as a gargle in the treatment of chronic laryngitis:

℞ Tinct. of capsicum fastigiatum....gramme 0.50.
Syrup of blackberries.....grammes 50.
Decoction of quinquina.....grammes 150.
M. Sig. To be used night and morning.

—*Rev. de Laryn. d'Otolog. et de Rhinologie,* Sept. 15, 1891.

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LEADING ARTICLE.

A NEW TREATMENT FOR TUBERCULOSIS.

The disastrous failure of Koch's supposed discovery for the prevention and cure of tuberculosis is yet only too fresh in the minds of the profession, and with the exception perhaps of Germany, the birth-place of the famous lymph, tuberculin has been almost completely laid aside as not only a useless agent in the treatment of consumption, but exceedingly dangerous to inject into the healthy or affected organism.

The clinical use of tuberculin, which seems to have received a deadly blow at the meeting of the Congress for the study of tuberculosis, held in Paris on July 27th to August 1st, 1891, is now followed by the announcement of a new treatment, proposed this time by Lannelongue, which attracted great attention at that gathering.

The method of Lannelongue, which was foreshadowed in 1879 by that of M. LeFort, has nothing in common with that of the German pathologist. The French author does not deal with vaccinating processes, with subcutaneous injections of any cultured microbe, nor with any specific remedy that directly attacks the tubercle bacillus. Lannelongue uses a solution of *chloride of zinc* which, when injected subcutaneously, acts not directly upon the tubercular foci, but on the tissue that surrounds these, forming dense fibrous investments around the tubercles and transforming and rendering the tissue insusceptible to the action of the bacilli, * and bringing about secondary changes.

The chloride of zinc seems to act the same on healthy tissues as it does on diseased ones. Thus, from experiments on healthy animals it was found that injections of the drug produced a fibroid change in the normal anatomical elements, and by repeating these experiments on animals previously rendered tuberculous, the same results were obtained

* For the technique of the treatment see article in the Periscope.

when the zinc was injected outside and around the tubercular tissue. The process sometimes ended in abscess, but usually it gave rise to the new formation of fibrous tissue, with disintegration and absorption of caseous matter, destroying, in this manner, morbid products. This action of the medicament was not limited to the tissues near the point of injection, but went beyond them.

These phenomena imbued the mind of the French observer with the idea of trying the process in the treatment of tubercular tissues. With the assistance of M. Achard, a series of experiments was instituted in the Hospital Trousseau, the results of which are embodied in the memoir read before the French Academy of Medicine during the sitting of the Congress. Thirty children, suffering from tubercular disease of the knee-joint were subjected to subcutaneous injections of the chloride of zinc, a treatment which, as it may be observed, is simplicity itself. In twenty of these cases that had received 9 or 10 injections during a period of three months, the most excellent results were produced. The swelling was much diminished, a formation of new tissue took place, and articular motion returned. For fully a month after the establishment of these happy changes, no return of abnormal phenomena was noticed, the patients continuing to improve, to gain in weight and apparently to enjoy all the prerogatives of perfectly healthy individuals.

Are these significant facts sufficiently strong to sustain the opinion that the cases under consideration were permanently cured? A cure can be said to be completely established when there is total disappearance of the bacilli from the organism; therefore, as Lannelongue himself has remarked, it can not be asserted from this preliminary study that such a victory has been attained. And yet, in a piece of tubercular tissue extirpated from one of the cases after the zinc treatment, there was revealed, on careful examintion, a fatty and fibrous change, *but not a single bacillus.* An injection of this new substance into a rabbit produced no effects whatever during a period of two months after the inoculation. But, may not there have been made in this particular case a wrong diagnoses in regard to the previous existence of tuberculosis? The author himself prefers to accept the responsibility of a wrong diagnosis rather than go beyond the limits marked by conscientious and thorough investigation.

On the whole, these researches are of extreme interest, and the results so far obtained of great practical importance.

Book Reviews.

THE POCKET ANATOMIST. Founded upon Gray. C. Henri Leonard, A. M., M. D., Professor of the Medical and Surgical Diseases of Women and Clinical Gynæcology in the Detroit College of Medicine. Fourteenth revised edition, containing Dissection Hints and Visceral Anatomy. Detroit Mich., 1891. The Illustrated Medical Journal Co., Publishers. Cloth 297 pages, 193 Illustrations; price, postpaid, $1.00.

The fact that this little book has reached the 14th revised edition, and that the sale has exceeded 12,000 copies, is sufficient evidence to show that it supplies a desired want. The illustrations are copious, and taken from Gray's Anatomy,—in fact, the author has made such literal use of this standard work that *The Pocket Anatomist* is a sort of a condensation of it with additions here and there. The paper is thin and glossy—unfortunate defects.

SELF-EXAMINATION FOR MEDICAL STUDENTS: 3,000 questions on Medical Subjects arranged for self-examination; with the proper references to standard works in which the correct replies will be found. Philadelphia: P. Blackiston, Son & Co.

This miniature work comprises about 3,000 questions on Anatomy, Physiology, Materia Medica, Therapeutics, Chemistry, Practice of Medicine, Surgery, Obstetics, Gynæology and Diseases of Children. The questions have been selected with regard to their bearing on practical medicine, and are such as would likely be asked in the quiz room and examinations. In order that the student can always find correct answers references are made to Gray's Anatomy, Gould's Dictionary, and various Quiz Compends by the same publishers.

There can be no doubt that the self-examination contemplated in this vest-pocket companion can be made very beneficial, but, on the other hand, a series of such questions

of such limited scope as those before us cannot have other than a prejudicial effect on the average student, because the inevitable tendency will be to confine his self-examination to the narrow limits of the questions asked. Such a book can only be acceptable when it is founded on text-books, and not on compends, which in themselves are bad enough.

PERISCOPE.

THERAPEUTICS.

THE TREATMENT OF TUBERCULOSIS BY INJECTIONS OF CHLORIDE OF ZINC.

The technique of operation as outlined by Dr. Lannelongue at the recent Congress for Tuberculosis at Paris is as follows:

I. *Non-Suppurating Tubercular Affections.* In osteo-articular tuberculosis of the hip, the limb is placed in a good position and extension maintained during the whole course of treatment. The injections are made upon the posterior surface of the neck of the femur, outside the capsule, upon both the superior and inferior borders, and upon the anterior aspect at its junction with the body of the femur. The needle is thrust in behind the great trochanter not far from this bony prominence so as to avoid wounding the sciatic nerve. To reach the inferior border of the neck, the needle is deviated downward and inward, and to reach superior border and a portion of the anterior surface of the neck it should be made to penetrate upward and immediately in front of the great trochanter. When the surface of the neck is felt the needle is drawn back so as not to inject into the articulation, but into its periphery.

In osteo-articular tuberculosis of the knee the leg is maintained in a position of extension by means of a splint. The injections are made over the different parts of the synovial membrane, commencing at the superior cul-de-sac. The needle is entered a short distance from the margin of the fungosities, penetrating each time as far as the femur; the injections are always made under the periosteum, the quantity injected varying from 10 drops in a child ten years old to one-third or one-half more in adults. The inferior synovial reflexion on each side of the patellar tendon is acted upon by injecting over each tuberosity of the tibia immediately below the articular margin of the epiphysis.

In tubercular affections of the ankle, the foot is maintained in a position at right angles to the leg. The injections are made in front over the anterior border of the tibia under the tendons, on the inside below the malleolus, and behind along this process. From 12 to 15 drops are injected in a child six to ten years of age.

In tubercular arthritis of the shoulder joint, a series of punctures varying from four to six, is made across the deltoid, over the external, anterior and posterior aspects of the humeral neck.

In tubercular arthritis of the elbow-joint the forearm is kept semi-flexed at first by a bandage and later by a plaster-of-Paris dressing. The fungosities at the elbow project over the superior extremity and sides of the oleocranon. The same procedure is applicable as in the knee.

In white swellings of the wrist the fungosities frequently extend to the sheaths of the extensor and flexor tendons of the hand; they start almost always from the radius and ulna. Consequently the injections are made at the level of the reflected cul-de-sac, over the forearm in front and behind, care being taken to avoid the nerves and arteries, and in the same manner at the level of the superior extremity of the metacarpal bones.

In tubercular arthritis of the hand and fingers one injects on each side of the lateral surface of the diaphyses, near their articular extremities.

In non-suppurating tubercular affections of the glands, the injections are made at different points around the ganglion and into the deeper parts. They give rise to an acute suppuration. In cases of tubercular nodules of the soft parts the same procedure may be applied with excellent results.

II. *Cold Abscesses of the Joints.* The treatment in these consists of punctures and and washing out of the cavity of the joint with sterilized water or an antiseptic solution. If the fluid does not reaccumulate and no reaction follows compression is employed; otherwise the same procedure is repeated. If a phlegmonous process develops multiple incisions are made, and if the articular surfaces, cartilages and bones are found disorganized the affected parts are removed, after previously injecting the periphery with the chloride of zinc solution so as to act upon the fungosities. The injections are repeated several times.—*Internat. Jour. Surg.*

THE CAUSE AND CURE OF BALDNESS.

Baldness, like obesity, is one of those

minor evils which could probably be much more thoroughly kept under control, if people would take more pains and begin earlier with their treatment.

Dr. M. Joseph Tyson, who writes upon idiopathic and premature baldness in *The Lancet*, makes some observations which quite corroborate this view. Thus he sums up the causes of baldness as insufficient exposure of the hair to the sun and air, close, ill-ventilated hats, excessive mental work and worry, the influence of heredity, venereal and alcoholic excesses, constant washing, and the neglect of using some oil or pomade. These causes vary in importance in different cases.

It can be plainly seen that this remedy is not a single or simple one.

Children, he says, should as much as possible do without caps, and hats when worn should be of the lightest description. During the hot season, a stouter hat is necessary for the prevention of sunstroke. A head covering should never be worn indoors, in trains, or in closed carriages. The kinds of material employed is of importance. In summer and still weather straw appears to be the best, on account of its lightness and permeability. In winter, hats made of light felt, well ventilated and unlined, are to be recommended. The ordinary tall hat, and the thick, heavy, unventilated top hat, cannot be too strongly condemned. Of course, nothing special can be said regarding hereditary or nervous influences. In concluding, however, he mentions a few minor points of treatment which should not be forgotten. Too constant washing of the hair is unnecessary, as well as harmful. Once a week is quite often enough for cleanliness, as well as for maintaining the strength of the hair. The same remark applies to constant brushing, for continual brushing, especially with hard brushes, should be avoided. There is a common notion that greasing the hair is vulgar so many persons fall into the other extreme, and never apply any pomade at all. After the hair has been washed it is certainly beneficial to apply some form of simple grease or oil. When the head-hair is becoming rapidly thinned, some stimulating material, such as ammonia and cantharides, added to the oil, will increase its good effects.

Dr. Tyson does not take into account one possibly important factor in causing baldness, viz., that of contagion. It has been held on good authority that many cases of baldness are parastic, and due to micro-organisms gathered from unclean brushes and combs.—*Med. Record.*

ABSORBENT LINIMENTS (LINIMENTA EXSICCANTIA) IN SKIN DISEASE.

Professor Pick, to whom belongs the merit of introducing medicated gelatines in the therapeutics of the skin, has suggested (*Prager Med. Wochenschrift*, 1891, No. 21) an important improvement in the method of preparation. Bassorin is a gum, unlike gum arabic, almost insoluble in water, in which, however, it swells to a syrup-like mass, which, when applied to or gently rubbed on a surface, dries as a very thin delicate covering. Linimentum exsiccans, the name which he gives to the preparation, can be prepared either by heat or cold. The constituents are 5 parts tragacanth, 2 parts glycerine, and 100 parts of distilled water. In small quantities it is best prepared cold, the finely-powdered tragacanth being well rubbed up with the other constituents, until it forms a homogenous syrup or lanolin-like mass. For preparation in large quantities it is best prepared warm, yielding in this way an aseptic mass which remains aseptic. The liniment so prepared is ready for use, and when allowed to dry in thin layers on inflamed and congested skin produces a feeling of coolness followed by a feeling of tension. The application is free from all the disadvantages connected with fatty substances. With the simple liniment compound liniments can be formed containing oily substances, such as oleum fagi, cadini, Rusci, ichthyol, styrax, balsam of Peru, etc., in proportions of 5 to 10 per cent. Insoluble substances, such as chrysarobin, oxide of zinc, the white, red or yellow precipitates of mercury, iodoform, iodol, salicylic acid, etc., can be added to it in various quantities until it may acquire the consistence of a paste, increasing its drying qualities. Pick found that a 10 per cent. tar liniment produced as much effect as a simple tar preparation, and on account of the smaller amount of absorption could be used more freely without danger.—*Brit. Med. Jour.*

THE TREATMENT OF ERYSIPELAS.

In the *American Journal of the Medical Sciences*, for July, 1891, Dr. Charles P. Allen publishes his conclusions as to the best method of the treatment of erysipelas, based upon his personal experience in the treatment of fifty-six cases and the reports of four hundred and sixty-six cases occurring in the Charity Hospital, New York.

In the first place, he recommends internally such symptomatic treatment as the nature of the case seems to require. Antipyretics only in case of high or persistent fever (over 103½° to 104°); then antipyrin in dose of at least gr. xv to xx for an adult, guarded by alcohol; cooling drinks. Calomel or saline aperients in full doses if constipation. If much weakness, alcoholic drinks given freely, especially at critical periods, and iron or iron and quinine; digitalis if much fever and prostration; bromide for delirium; antipyrin or phenacetin for headache, with cold applications to head, and as concentrated and nutritious a diet as possible.

Second, locally, he paints the patch and surrounding margin of the healthy skin thickly with ichthyol in collodion, ʒj to ʒij to ℥j. If the scalp is the region affected, a watery solution or ointment of ichthyol can be employed. To arrest the spread, he makes an attempt either with the band of adhesive plaster or by scarification, or both, the latter to follow the former, in case the disease spreads beyond the adhesive strips. In erysipelas of the face, which has not yet reached the forehead, or at least its upper part, he would apply a band tightly about the forehead and just above the ears, cutting the hair in a strip around if necessary to secure firm pressure. The chances of arresting the process here should be at least equal to those of checking the spread upon an extremity, for we have a hard bony base over which to make our compression. If the boundary is passed, then he should at once have the scalp shaved and apply another band higher up. The hair should be cut in any case in which the scalp is invaded or threatened. Then the same application of ichthyol in collodion can be made, as to the face or other part. If there be much tension, swelling, heat, and discomfort (which is not apt to be the case under collodion), any oily substance can be applied over it.

In treating erysipelas, the uncertainty of *prognosis* must always be kept in mind. Cases, in all appearances mild in the beginning, may become severe and prove fatal, while formidable-appearing areas may suddenly cease spreading spontaneously. It is scarcely more safe to say a case will progress favorably (though the great majority do) than to claim that the particular line of treatment instituted has prevented an unfavorable termination, or proven abortive, unless a whole series of cases under a given method have terminated in a shorter than the average time.

Naturally, when the erysipelatous process has its sources in a pus collection, such as an abscess, pustule, ulcer, foul wound, carious tooth, diseased duct, etc., the first care must be to secure as prompt and thorough disinfection and cleansing as possible. Pus must be destroyed and purity maintained. A solution of peroxide of hydrogen will often be found useful in effecting this purpose. In such cases a spontaneous halt may be hoped for. In the same way a diseased mucous membrane must be cared for; excoriations, ulcerations, rhinitis, or other disease of the nasal mucous membrane or affection of the throat must be looked after. It is probable that every case of facial erysipelas starts from local solution of continuity either upon the skin or adjacent mucous membranes, and we simply call some cases "idiopathic" or "genuine" when we fail to find the point where the micrococci have entered.

As a prophylactic measure in those predisposed to repeated attacks, great care should be taken to discover and cure affections of mucous membranes, carious teeth, ulcerations, or other disease processes or conditions as possible means of maintaining the tendency. Recurrences after apparent cure must be kept in mind and treatment continued sufficiently long to prevent them. —*Ther. Gaz.*

MEDICINE.

HYSTERICAL LARYNGEAL DYSPNŒA.

In the night of May 13th I was asked by a medical man to see a young woman, who, it was thought, would require tracheotomy. She had very marked laryngeal dyspnœa, with stridulous inspiration and marked retraction of the chest. At intervals the laryngeal spasms became so extreme that no air entered; she struggled for breath, the pulse nearly stopped, and then with a stridulous inspiration air began to enter again. On examination of the larynx I found there was no laryngitis, but the cords were strongly adducted. Her voice, though weak, was clear. Inhalation of a few whiffs of chloroform and the application of a hot sponge over the larynx had no effect. The history of the case was that a fortnight previously she began to suffer from these attacks of dyspnœa, which were very frequent and severe for the first few days, and then had gradually diminished in frequency and severity until they had quite ceased by May 10th. On the night of the 12th she had a

severe one, but was never quite so bad as on the following night when I saw her. For a week before the attacks began she had suffered from rigidity of the muscles of the back. She had lately complained of "cramps" in the arms and legs, which I thought might be hysterical tonic spasm, and so so decided to try galvanism. This I did over the larynx and in the course of the pneumogastric nerves, using thirty cells, but beginning with twenty. In five minutes the spasm, which had been urgent for five hours, had ceased. I then examined her larynx, and found the cords well abducted at the end of phonation. During that night there was only one very slight and short recurrence, and there have been only two since (May 17th), most trivial in character. Dr. Charles A. Morton, in the *Brit. Med. Jour.*

THE GERMICIDAL POWER OF THE BLOOD.

The blood is known to have germicidal properties, and these properties have recently been studied by Von Fodor, who reaches some interesting conclusions. He finds that increased alkalescence of the blood raises its germicidal power very much. The drugs which do this most effectively are the carbonates of sodium and of potassium. By the alkalinization of the blood of rabbits he made a large per cent. of them refractory to anthrax. Hydrochloric acid had no effect on the germ-destroying power of the blood, while quinine actually lessened it.

These observations are of interest in connection with the observations of Bordas who asserts that he has discovered the specific microbe of acute rheumatism, it being, he thinks, an organism allied to the micrococcus pyogenes.

On the other hand, the statement that quinine lessens the germicidal power of the blood is absolutely untrue, as regards the plasmodium of Laveran at least. We are accustomed to think also that hydrochloric acid is a good drug to take in order to prevent the infection of cholera and other germs which get in by way of the stomach. Von Fodor's observations, therefore, cannot have a general application.

He states that temperatures up to 39° C. or 40° C. also increase the fighting power of the blood against pathogenic organisms.—

ABSENCE OF THE PATELLAR TENDON-REFLEX IN INTERSTITIAL KERATITIS.

Lang and Wood (*Royal London Ophthalmic Hos. Reports*, Vol. XII., p. 312,) have recorded the results of their examination of sixty-two cases of interstitial keratitis in reference to the presence or absence of the patellar tendon-reflex, from which they conclude:

1. That in about 30 per cent. of all cases of interstitial keratitis the knee-jerk is decidedly subnormal.

2. That in about 10 per cent. of all cases it is entirely absent—all known cases of subnormal tendon-reflexes, outside of the constant fact that the local eye-disease exists, having been eliminated.

3. It is probable also that in a very small percentage of cases of diminished and absent knee-jerks the usual constitutional dyscrasia cannot be demonstrated.

4. That it is rare to find a case of exaggerated patellar tendon-reflex interstitial keratitis when unaccompanied by some of the affections known to produce the former. —*Ex.*

THE COCAINE HABIT.

In a summary of recent papers upon the cocaine habit, now regarded by some as "one of the three scourges of mankind," Dr. Edmund Falk points out that it has a characteristic clinical picture: on the one side in the cachexia or bodily ruin, on the other side in the moral impairment and pronounced mental affection. Patients who use cocaine alone—and those who have endeavored to wean themselves from morphine by its aid, and so added cocainism to the morphine habit—appear marasmatic. The skin is of a pale yellowish, almost cadaveric tint and withered feel; the extremities are cool and covered with cold sweat. The eyes are deeply sunken, glistening, and surrounded by a dark ring; the pupils widely dilated. Appetite is lost; digestion disturbed. Salivation with dryness of throat may be complained of, and further, partial sensory disturbances or total analgesia. From the paralyzing action of cocaine upon the blood-vessels, patients complain of palpitation and breathlessness, troublesome sweating and noises in the ears, and also syncopal attacks and dyspnœa. The pulse is more frequent and easily compressible. They suffer from a want which must be satisfied; they become nervous, trembling, and fall into a wretched condition of neurasthenia. Speech is disconnected and scarcely be understood; impotence and incontinence of urine may appear. Sleeplessness sets in

early. One of the most characteristic effects of this habit is the occurrence of muscular twitching, tonic and clonic convulsions, and finally, epileptic attacks in which the patient may die. The mental symptoms may take the form of hallucinations, usually of general sensation, but not infrequently of sight as well. General mental weakness may set in rather early, to be observed in a loss of memory and unusual prolixity in conversation and correspondence. When the drug is withdrawn, besides the vasomotor symptoms there may be seen depression, impairment of will-power, weeping, etc. The chronic form does not protect from acute intoxication.—(*Therap. Monatshefte*, No. 12, 1891.)

PARTIAL EPILEPSY OF THE SUB-CORTICAL ORIGIN.

Duflocq, in a contribution to the study of cerebral localizations, reports an interesting case of partial epilepsy in which the case of the paroxysms—an old and well-encapsulated blood-cyst—was without any point of contact with the cortical layer of the brain, but was completely separated from the gray substance by an absolutely healthy layer of white matter. The patient was a hatter, forty years of age, who gave a history of a fall from a step-ladder twenty years before, striking upon his head. There was no loss of consciousness and no subsequent pains in the head. He had had no syphilis, nor had he ever handled the acid nitrate of mercury. Three days before his admission into the hospital he was suddenly taken with a form of aura, consisting of a construction which began at the epigastrium and in a few moments mounted to the throat, thence radiating toward the left side of the jaw. The patient heard a loud noise, which seemed to resound in the left half of the head and the left side of the chest at the left side of the semi-lunar space. Severe pains in the head were felt, which persisted throughout the attack. The attack commenced at the moment the painful constriction reached the throat. The first phenomenon was a drawing of the tongue backward, so that respiration was impeded; then the head was turned slightly toward the left and inclined upon the left shoulder. The left corner of the mouth was drawn toward the ear; the mouth was slightly opened and held so. The eye did not participate in the convulsions. The movement extended to the shoulder, but the muscles of the arm and forearm remained relaxed. The head was strongly held by muscular contraction to the left shoulder during the paroxysm. The end of the crises was marked by a pretty abundant salivation, which commenced a little previous to the end. The tongue was hard and could not be drawn out. The patient could emit only unitelligible and hoarse sounds, but memory and consciousness were well preserved. The pulse was regular and the respiration preserved its normal rhythm. After the attack there existed a facial paresis. There was no febrile elevation. Successive attacks were followed by loss of consciousness, increasing stupor, and death five days after admission. Trepanation was performed on the morning of the last day, with very marked amelioration of the symptoms. The patient spoke, drank and watched a game of dominoes, but death occurred in the evening.

The autopsy revealed no deformity of the cranial walls. The brain and dura and pia mater were intact. The left hemisphere was normal. Examination of the surface of the right Rolandic region showed nothing abnormal. The fissures were clearly marked and the gray matter presented its usual coloration. An antero-posterior section, made just above the plane of the corpus callossum, revealed a brownish-red mass in the middle of the white substance corresponding to the lower extremity of the ascending frontal convolution. This mass was rounded in form and the size of a billiard-ball. It was surrounded by two concentric zones—the inner one clear yellow and of a slightly softened consistency; the outer one was of the consistency and ordinary appearance of the white substance. Finally, toward the surface of the convolution was a perfectly intact band of gray matter. A vertical and transverse section at the level of the foot of the ascending frontal (the frontal section of Pitres) showed the approaches to this rounded mass to be reddish in color. The mass was found to be composed almost entirely of the white substance of the lower frontal fasciculus (the foot of the ascending frontal), and the region of the island was intact. The external capsule was far distant from the diseased focus. There was no atheroma of the arteries of the base of the brain. The brownish mass was firm and was composed of a central portion of a mahogany-colored detritus, slightly foliated and manifestly consisting of blood. Around this was a shell firm and thin.

It is quite exceptional to see a tumor situated in the white substance give rise to a partial epilepsy. Duflocq has searched med-

ical literature and has succeeded in finding only three cases which are analogous to the one above reported—those of Osler (*American Journal of the Medical Sciences*, January, 1885), Taddeo de Hyeronomgs (*Riform. Med.*, 1887), and Bouveret (*Lyon Méd.*, September 28, 1884). The clinical study of the patient above recorded reveals a certain number of functional troubles which appeared at the same moment as the epileptic crisis and which constituted it. These are the traction of the tongue backward, the retraction of the labial commissure, the opening and contraction of the mouth, the constriction of the pharynx, and the alteration of the voice. To each of these troubles a cortical centre corresponds, which numerous experiments and a few rare clinical observations have located in the lower third of the ascending frontal convolution. But it was in the white substance immediately adjacent to this limited region that the autopsy of this patient showed the existence of a hard, small, and perfectly circumscribed focus, of very old date, and one which could not have determined any lesion in the vicinity. All the centres involved indicated in a very positive manner that the seat of the lesion was the foot of the ascending frontal convolution; and if it is established that partial epilepsy may be of subcortical origin, the operator should feel authorized to search, in analogous cases, even in the white substance subjacent to the cortical centres for the original cause of the epileptiform seizures noticed in the patient.—*Revue Médicale*, Feb. 10, 1891.

RELATION OF ASTHMA TO OTHER DISEASES.

Dr. Samuel West, in *The Practitioner*, after a careful study of this subject reaches the following conclusions: Asthma must be regarded as a reflex neurosis, the symptoms of which are spasm of the bronchial muscles, of the diaphragm, and of other inspiratory muscles associated in many cases with more or less vasomotor disturbance in the bronchi.

The theory necessitates the assumption of a peculiar unstable condition of the respiratory centres, the nature of which is at present unknown, but which constitutes the essential predisposing cause of the disease, and which in all probability is the only heritable part of it.

In all this the resemblance of asthma to epilepsy is very close, and Hughlings Jackson does not shrink from curtly defining asthma to be "a respiratory convulsion," and I presume that he regards it as possibly, in many cases, a congenital affection, for he proceeds to attribute it to "the discharge of imperfect (? small) respiratory centres."

It is interesting to find that this theory brings us back to the view originally propounded in his *Zoonomia* by Erasmus Darwin, who stated that *asthma convulsisum* had the same character as all other cramps and epilepsies, and that it could originate like them from nearly all distant parts of the body.

HYSTERICAL TREMOR.

Dr. Remond, in the "*Gazette des Hopitaux*," gives us two cases of this curious affection. The first was a man, fifty-four years old. He had not been a drinker, nor had he ever contracted syphilis.

Two months before, while witnessing a review, he had been knocked down by the horse of a cavalryman and very much frightened. This was followed by violent headache, and his legs and arms trembled so that he could not hold anything in his hands, and he was hardly able to stand erect. When in repose, his hands do not move; but if he tries to carry a glass of water to his mouth, he is utterly unable to do it on account of the trembling.

The knee-jerks are slightly exaggerated. Ankle-clonus absent. Pupils small and equal; no nystagmus. Voice slow and jerky. Anæsthesia of the legs and arms; there was also anæsthesia of the pharynx, and just above the right eye there was a very painful point.

Here were two sets of symptoms, one pointing very strongly to multiple sclerosis and the other to hysteria. Which of the two was it?

Small doses of bromide were given, along with elaborate directions, and much stress laid upon the wonderful healing power of the remedy. In less than a month all the symptoms had vanished and the patient demanded his discharge.

It is hardly necessary to say that the affection was undoubtedly hysteria.

The second case was that of a roofer, thirty-eight years old. One year ago he experienced a severe fright in falling on a roof. A chimney stopped him and saved his life; but when he was picked up he was paralyzed on one side and aphasic. He was removed to the hospital, and cured in five months and a-half.

Two weeks ago, after a severe mental shock, he fell down unconscious, and when he came to himself he was affected with

trembling, which has grown worse ever since. In the right arm it is a tremor resembling paralysis agitans. When any movement is attempted the tremor in the right arm ceases, but the member moved is affected with tremor which closely resembles that of multiple sclerosis. His speech is slow and halting, but the tongue does not tremble. There is almost complete anæsthesia of the entire surface of the body. The knee-jerks are exaggerated; ankle-clonus present. When attempting to walk, he cannot hold himself erect without assistance, and the body is affected with continual shocks.

This case left the hospital before the crucial test of cure could be applied. These two cases belong in the same category, however. It is always hysteria, that protean neurosis, imitating first one disease, then another, occasionally superposing itself upon other affections, but never combining with them.—*Jour. Nerv. Ment. Dis.*

SURGERY.

THE PRESENT STATUS OF THE TREATMENT OF URINARY CALCULUS.

Every few years we find the practice in any particular form of disease undergoes radical changes, so that the methods in vogue in the near past are almost entirely superseded by newer and more modern ones; or possibly, the profession reverts to an operation largely practiced in the past, one which has remained quiescent for a number of years, only to be again brought forward.

In regard to the affection under consideration, the modern (present day) sentiment appears to be as follows:

1. Wherever possible, resort to litholapaxy.

2. If litholapaxy is contra-indicated by a sacculated bladder, a high degree of cystitis, stricture of the urethra, or an irritable, contracted bladder, one of the cutting operations must be performed.

3. If the stone is not very large, and can be extracted by that method, the median perineal method is preferred.

4. If the stone is very large, or if there is reason to suspect the co-existence of tumors of the bladder, or any other reason calling for a complete exploration of the interior of the bladder, resort should be had to supra-pubic cystotomy.

5. The existence of cystitis, or other necessity for drainage of the bladder, calls for the lateral operation.

From the above summary it at once becomes evident that the range of lateral lithotomy has been largely curtailed, while that of litholapaxy has been wonderfully increased. In fact, the crushing operation is now almost universally recognized as the operation of choice whenever possible. The grounds upon which this decision rests are that the crushing operation is less risky; it is applicable to all ages; the time of convalescence is very short compared with the other operations, and the mortality is much lower.

The chief objection against litholapaxy is the possibility of leaving some fragment of the stone in the bladder, to act as a nucleus for a new stone. This oversight has frequently occurred, but the fragment has always been detected early, and is easily removed by reintroducing the lithotrite.

The dangers and difficulties of the median operation are usually slight, but its range of successful application is limited. The time necessary for the healing of the wound is an objection.

Supra-pubic cystotomy is somewhat difficult of performance, more paraphernalia are required, and the dangers of complications are perhaps greater than those of any other operation for the relief of this trouble.

At present the tendency is to almost entirely banish lateral lithotomy from the list of surgical procedures applicable to this affection, preference being given to either the median or supra-pubic operation. Time only can determine whether this condition of affairs will continue or not. Some surgeons still cling to the lateral incision and are loth to discard it.

In this editorial we have endeavored to present to our readers, in as concise form as possible, the views held by the leading surgeons of the day, and have aimed to avoid expressing any prejudiced or biased views. To sum the whole matter up in a few words, we can say—this is an age of litholapaxy.—*Cincinnati Lancet and Clinic.*

A PLASTIC OPERATION OF THE ULNAR NERVE.

Prof. Dittel showed a washerwoman, æt. 22, who had the upper arm lacerated by a pressing machine on December 8th, 1890, and who was received into Hospital on the 9th. In the middle of the upper arm the laceration had carried away a large quantity of tissue, exposing all the deep structures.

About seven ctm. above the internal condyle the stump of the ulnar nerve was observed, but the proximal section could not be found for some time, but when it was discovered five ctm. of its length had been carried away with the lost tissue. Sensibility and motility were absent over the area of the ulnar supply. The wound was dressed antiseptically, and in a few days sensibility was restored. Four weeks after the wound had granulated, and January 12, 1891, he commenced the union of the ulnar nerve by taking a flap from above and lowering the nerve about 1½ ctm.; another from below of about 5 ctms. The edges of the two flaps after coaptation were fastened by three catgut ligatures. On April 5th, the electric current produced contractions and active movement of the whole hands.

Dr. von Fillenbaum related the history of a case where an officer in his company had a cut over the right condyle. In the month of August, stitches were applied and the skin united by first intention. The following week the hand commenced gradually to be powerless and become soon unable to hold a sword. The thenar, antithenar, and interossei muscles began to waste. In November he was taken into Hospital and electric treatment commenced, but without success. On examining the arm, a hard scar about the size of a bean was discovered. It was tender on pressure and diagnosed a neuroma. On opening up this scar the ulnar nerve was found to be twisted round and separated from the distal end by adherent tissue. This was cleared away, the two ends of the nerve freshened and brought together with a stitch and four fine silk ligatures in the neurolemma. Healing took place in eight days, and a week after the electric current produced contractions, the muscles began to increase and functional activity to improve.

Prof. Weinlechner said that in the dividing of mixed nerves, the sensibility was seldom lost, as the collateral nerves soon supplied the defect resulting from the injured trunk.—*Med. Press.*

TEST OF COMPLETE CHLOROFORM NARCOSIS.

Guelliot (*Journal de Médecine de Paris*) claims that the absence of the cremasteric reflex, is one of the best and readiest means of determining complete chloroform narcosis. The quickness and force with which the reaction is produced is some index of the degree of narcosis. The point seems to be one well worthy of consideration by the practical surgeon.

HERNIÆ IN MEDIAN LINE OF THE ABDOMEN.

In an exhaustive article on this subject, in *Volkmann's Samml. Klin. Vortr.*, Dr. Witzel states that these hernia originate from congenital clefts in the linea alba. They are usually situated above the navel, and a little to the right or left of the median line. The predisposing causes comprise distension of the anterior abdominal walls, rapid emaciation, trauma, over extension of the trunk during exertion. Owing to intra-abdominal pressure, the superitoneal fat, which is only loosely attached to the abdominal wall, is forced through the opening in the fibrous tissue, and this is followed by protrusion of the peritoneum, and later of other structures (omentum, stomach, intestines.) The hernia, which is small at first, increases very rapidly. The symptoms consist of gastric affections, pains in the upper region of the abdomen, nervous disturbances, which are present from the first and increase in severity. The diagnosis is readily made by abdominal palpation, which should never be omitted in cases where these symptoms are present. The examination is best made at different times. After a meal and in the upright posture the tumor is more prominent; in the dorsal position it disappears entirely; forced respiratory movements cause an enlargement. The small hernia can be easily reduced by pressure, and under favorable conditions, the cleft in the abdominal wall can be felt. The larger ones can be compressed and diminished in size, but cannot be made to disappear completely, a round soft tumor remaining. As regards treatment, if the hernia is fully reduced, a truss will afford great relief; in other cases the radical operation is indicated. The pedicle should not be simply transfixed and excised, but the fatty layer on the sac should be incised, the sac isolated and opened, in order to make sure that no adhesions of the omentum remain.—*Oest.-urgar. Centralbl. f. d. Medicin. Wissensch.*, No. 23, 1891.

THE RADICAL CURE OF INGUINAL HERNIA IN THE FEMALE.

This was the subject of a communication to the Société de Chirurgie by M. Lucas-Championnière, which has been reported in the *Gazette Hebdomadaire.* He has performed many of these operations on females

who had suffered much from hernias; he believes that a certain number of the cases were congenital. He operates as follows:

"I dissect very carefully the sack into the abdominal cavity; the dissection made, I divide the sack without hesitation and the round ligament which, no doubt, becomes attached to the wall. I have never had any unfavorable result from this mode of operating.

"The connection of the sack with the genital organs is very interesting; the ovary is often within the sack or in its orifice; it is normal or sclero-cystic or atrophied. I have often removed it.

"Another interesting feature is, that in the female the canal is more distended above than below, so that the suture of the walls of the canal is easily and satisfactorily done, and in a remarkable degree assures the permanence of the cure without bandages.

"One of the most valuable results of the operation is the removal of the pain caused by the hernia. The cure remains complete. In one of my patients, the one in which the hernia descended as far as the knees, the walls closed and withstood, without injury, two periods of gestation and two natural labors. In order to give assurance to the patient, I allow her to wear a belt with a pad, but limit its use to five or six months."

At the next meeting of the Société M. Berger took exception to some of the remarks of M. Lucas-Championniere, regarding the pathological anatomy and the etiology of these forms of hernia:

"There are," he said, "in the female two kinds of inguinal hernia: one in which the sack is not in immediate connection with the round ligament, is without adhesions, may be very easily separated, for there is no danger, as in the male, of wounding the different parts within the chord—these are the acquired hernias. In the others the round ligament is closely united with a very thin sack, which is very easily torn—these are the congenital hernias.

"Even in these cases I have always been able to isolate the ligament and to separate it from the pellicle of peritoneum which covers it. However, the preservation entire or the division of the round ligament is of very little consequence.

"I have not observed the lesions of the neighboring parts so often as M. Championniere; I have never met the ovary; I have seen the Fallopian tube sometimes, but I have always found it easy to turn it back into the abdominal cavity and to close the peritoneum quite near the place where the canal was detached.

"To effect a radical cure, I take great care to carry the dissection of the sack very high up, and to separate at the same time the adjoining peritoneum; for this reason I divide the anterior wall of the canal very extensively; I fasten its pedicle high up within the abdominal cavity. I then endeavor to restore the inguinal track by suturing, step by step, and for these sutures I prefer silk to catgut, because it is not so easily absorbed. This restoration of the inguinal canal seems to me to be of the greatest importance.

"Mr. Championniere thinks that the greater number of hernias are adherent; he dissects the sack very high up, even to the ligament, and does not fasten the pedicle."—*Sanitarian.*

GYNÆCOLOGY.

ON PLUGGING THE CERVIX UTERI INSTEAD OF VAGINA IN UTERINE HÆMORRHAGE.

Plugging the cervical canal in cases of severe uterine hæmorrhage (other than post-partum) will be found more effectual and much more comfortable to the patient than the older method of plugging the vagina.

The want of a simple means for completely filling the cervical canal has long been felt, but I think it will be found a simple matter by the use of an instrument constructed as follows: It is simply an improved form of sliding depositor, the difference being that, instead of the canula being pushed forward on the rod, the latter is made to retreat into the canula by the pressure of the fingers on projecting side-bars, and so the cotton plug dressing the top of the rod is pushed home with certainty into the cervix. It may be urged that in cases of metrorrhagia or very early abortion a sponge-tent or sea-tangle would be an easier mode of treatment, and quite as effectual. But besides the inconvenience of having to place a tampon in the vagina as well, to insure retention of the tangle or sponge, we have also the great liability to sepsis, and I certainly prefer being on the safe side.

The size of the os being determined by digital examination, a piece of absorbent cotton is to be neatly wound round the projecting point of the instrument for about two inches of its length, and thickly enough to fully

fill the canal. The cotton plug is then to be saturated with whatever antiseptic styptic the operator prefers—saturated solution of alum in glycerin, iodine tincture, or turpentine; but I have a strong dislike for iron.

A large-sized cylindrical speculum is then introduced and the os and cervix syringed with hot water, so as to wash away all clots. The cervix is then to be steadied with a tenaculum, held in the left hand, while the plug is passed into the cervix, with the depositor held in the right, as far as possible, and, on pressure being made on the side-bars while the thumb supports the base of the instrument, the plug is pushed off the rod and the depositor withdrawn.

The whole operation can thus be done without assistance. If the plug has been made of the proper dimensions, which, of course, must depend on the judgment of the operator, and inserted fully into the cervical canal, there need be no anxiety as to the result, and the antiseptic and astringent action of turpentine, which I generally use myself, leaves nothing to be desired.

The plug may be safely left till expelled by uterine action, when, if the hæmorrhage continue, the practitioner will be prepared to adopt other measures—washing out, or curetting the uterus, or both. With a sponge-tent or sea-tangle in the womb it is always an anxious time for the practitioner, but with the plug properly in position he can take his own time about further interference.—*Dr. Alex. Duke in Satellite.*

TWO NEW METHODS FOR THE CLOSURE OF RECTO-VAGINAL FISTULÆ.

Le Dentu (*Ann. de Gyn.*) proposes a new method for cases of recto-vaginal fistula. He prepares a flap in the shape of a half-moon, immediately below the vaginal opening into the vagina, then refreshes a corresponding surface above the fistula, and unites the flap to the refreshed surface. In this way there results a valve-like closure.

It is not applicable when the fistula is high up in the vagina, or when it opens into the vulva, or is very large.

Felizet describes still another method. He splits the perineum transversely to a point above the fistula. In this way two fistulæ result, a vagino-perineal and a recto-perineal. The first is closed by sutures, and the latter is opened up through the sphincter and anterior rectal wall in the same manner as for the ordinary fistula in ano. The gases and fæcal masses escape through the free opening, and allow the vaginal fistula to close.

OBSTETRICS.

HÆMORRHAGE FROM THE MEMBRANES DURING LABOR.

Ballantyne (*Edinburgh Medical Journal*, No. 581, p. 1006, 1891) reports the case of a pimipara who had uterine hæmorrhage during the first stage of labor; examination failed to reveal any cause for hæmorrhage; labor proceeding, slight hæmorrhage occurred and the patient was delivered spontaneously of a small and feebly developed fœtus. A slight amount of hæmorrhage followed the birth of the child; but no unusual bleeding occurred after the delivery of the placenta; the child perished of heart failure soon after birth. During the lying-in state slight fever occurred during the second and third day, with an attack of urticaria and painful swelling of the breasts.

When the placenta and membranes were examined the placenta showed a small apoplexy with areas of fibroid thickening; around the aperture where the membranes ruptured there was a vascular zone varying in breadth from three-quarters of an inch to two inches; the blood vessels of this zone were situated either in the chorion or in the shreds of the decidua attached to its surface. Two primitive villi were found in this zone; an intra-mural fibroid was found in the lower segment of the uterus, which may have favored the hæmorrhage by maintaining a vascular condition of the parts.—*Amer. Jour. Med. Sci.*

SUBCUTANEOUS INJECTIONS OF CAFFEINE IN THE TREATMENT OF PEURPERAL HÆMORRHAGE.

Misrachi (*Jour. de mêd.*, March 8, 1891) recommends this method of using caffeine for cases of post-partum hæmorrhage in which a rapid effect is required. It is of special advantage to the country practitioner, who may at the time be attending cases of infectious diseases and whose hands may not be sufficiently disinfected to justify a digital examination of the genital organs of the parturiant patient. The author states that caffeine will act more rapidly than ergot and more efficiently than ether, though the latter is more rapid in its action as a stimulant. The caffeine should be administered in a solution containing a grain and a quarter of the substance, and this may be

repeated if necessary until five grains have been used. A better solution may be obtained by dissolving the caffeine in warm water with benzoate of sodium. It is recommended that packages containing both these materials form a portion of the contents of the obstetrician's bag.

CŒLIOTOMY FOR RUPTURE OF THE PARTURIENT UTERUS.

The treatment of ruptured uterus when this grave injury results during the progress of labor is, fortunately, a subject that is not likely to be often considered in general practice; but the possibility of the accident being encountered even when wholly unexpected, makes it incumbent on all practitioners to be at least decided on the steps of a remedial nature that would elect to follow in such an emergency. It is by no means improbable that a number of cases of death after delivery, and which are attributed to the influence of shock, are in reality due to spontaneous rupture of the uterus. It is likely, too, that the excessive mortality recorded in connection with the operative treatment of the condition when occurring during parturition is allied to delay in adoption to the necessary measures with a promptitude which in this more than any other surgical emergency is especially called for. In recent years a good deal has been said and written in defense of immediate abdominal section on the formation of a diagnosis of ruptured uterus; and it is particularly among American surgeons that the whole question has been discussed, the term cœliotomy being now revived by them for application to this division of abdominal surgery particularly. The expectant treatment cannot possibly be successful in any but the most trivial example of the injury, and from the nature of the lesion involved, whether originating in mechanical injury, or through the spontaneous action of the organ, it necessarily follows that only the most radical procedure can be productive of benefit; and that only when it is promptly pursued. In a paper read before the American Medical Association at this year's meeting, Dr. Coe, of New York, described four cases of rupture of the parturient uterus in his own practice, in only the first of which did success reward his efforts to save life by performance of cœliotomy. In this the womb ruptured in consequence of improper attempts at version, and the application of forceps in the first stage of labor, and the operation of cœliotomy was done within two hours after the accident. The uterus was removed, and the pedicle treated extra-peritoneally. In all the other three cases operation was delayed till many hours after occurrence of rupture, and in each death took place from shock. In advocating resort to the measure he suggests in these cases, Dr. Coe deprecates any intention of recommending heroic treatment in every instance. But he very properly insists that in so desperate a condition as rupture of the parturient womb, the surgery that is prompt to relieve by radical methods is the most truly conservative in its results, and that the patient's best interests are consulted most closely by him who estimates the extreme gravity of the circumstances in which she is placed by the occurrence of the accident. The operation moreover, is not necessarily contra-indicated by reason of the unfavorable statistics associated with it so far. These may, without doubt, be expected to undergo improvement *pari passu* with a readier diagnosis and the avoidance of delay in resorting to operation when rupture is clearly evidenced.—*Medical Press.*

PÆDIATRICS.

ABDOMINAL MASSAGE IN THE TREATMENT OF CONSTIPATION IN CHILDREN.

Karnitzky's method of treatment (*Journ. de Méd.*) was used by him in twelve cases of chronic and twelve cases of acute constipation in children from eight to eleven years of age. The following are his conclusions:

1. Abdominal massage may produce effects upon the alimentary tract, in connection with digestion, which are not inferior to those produced by purgatives.

2. Habitual constipation may be easily cured by massage without the aid of purgatives.

3. The younger a child is the more readily can the constipation be cured.

4. The younger a child is the milder should the manipulations be, and the shorter the *séances.*

5. The duration of the *séances* should be from three to ten minutes according to the age of the patient. Longer *séances* are inadvisable, and may even be harmful and aggravate the condition of the patient.

6. Abdominal massage may be regarded as the best means of treatiug constipation in children. Purgatives should only be used in exceptional cases.—*Archives Pœdiatrics.*

HYGIENE.

ETIOLOGY OF DIPHTHERIA.

Dr. Klein (*Nineteenth Annual Report of the Local Government Board*, 1889–90, p. 143) gives the results of a new series of researches on diphtheria. He examines false membranes as cover-glass preparations after treating as follows: A particle of fresh membrane is well skaken in a test tube of 10 cubic centimetres boiled salt solution; this is poured off, a new quantity is added, and the whole is again well shaken; by this means the superficial part of the membrane is cleansed from the surface organisms. The sample of the diphtheritic membrane is well rubbed over the cover glass, the film so formed is dried, stained in a 2 per cent. watery solution of rubin for twelve hours at the ordinary temperature of the room (or in an incubator for half an hour), and well washed in water. A contrast stain is obtained by treating with methyl-blue aniline water for from two to five minutes. As a result of his observations, Klein holds that the organism he has found is identical with that described by Loeffler, but that the so-called involution forms (wedge shaped, conical, etc). are not involution forms at all, as they are invariably found, even in very recent cultivations. He obtains cultures by washing the membrane repeatedly, and then inoculating with a drop of the last salt solution on to the surface of nutrient agar or on gelatine. In 12 out of 22 cases he found an organism that does not grow on gelatine at ordinary temperatures; this he looks upon as a pseudo-diphtheria bacillus. The other organism found in all 22 cases grows on gelatine, but Loeffler has recognized the fact that it is the same as the one he described, and that the other organism, which does not grow in gelatine, and was found in 12 only out of 22 cases, is the pseudo-bacillus. The pseudo-bacillus dies rapidly when its cultures are kept at the ordinary temperature for a few months. The true diphtheria bacillus remains active for eighteen months. It grows actively in milk at a temperature of 19° to 20° C., not nearly so readily at 36° to 37°. The organism is destroyed at a temperature of 60°, continued for five minutes. As regards the position of the organism in the diphtheria membrane, Klein agrees with other observers. From inoculation experiments it was found that fresh (that is, two to six days) gelatine, agar, or broth cultures are very virulent, that agar cultures after eight days, and gelatine cultures after five weeks, are "less virulent, and cannot be relied upon as uniformly infective to guinea-pigs." The author agrees with other observers that the bacillus when inoculated produces a chemical poison at the seat of inoculation. From a considerable number of experiments he comes to the conclusion that a diphtheritic condition may be induced in cats by superficial inoculation of the cornea or conjunctiva with cultures of the diphtheria bacillus or by subcutaneous inoculation into the groin. A distinct local disease similar to that produced in the guinea-pig is set up; there is marked congestion of the viscera and typical cloudy swelling and fatty degeneration of the kidney similar to that met with in the human subject. When inoculations are made simultaneously into the cornea and into the groin local reaction is obtained, but the constitutional and visceral changes were not nearly so distinctly marked.—*Brit. Med. Jour.*

DENTAL ASEPSIS.

There is reason to suspect that Listerian dogmas have not yet permeated the dental department of surgery, and that there is room for improvement in relation to the antisepsis of the instruments employed in the dental art. We do not go so far as to advocate the extraction of teeth under the carbolic spray, but there are undoubtedly some very tangible risks involved by negligence in this respect, foremost among which is the possibility of transmitting syphilis and blood-poisoning. The mouth is itself the perfect model of an incubator for the spores of bacteria, fulfilling all the requirements as to heat and moisture, besides providing suitable media for their development. The dentist therefore cannot be too scrupulously careful in providing for the freedom of his hand and of his instruments from "misplaced matter," *alias* dirt. Nothing is more likely to secure for him the confidence and esteem of patients than an ostentatious observance of the laws of surgical cleanliness. For this reason we are disposed to advise the methodical use of antiseptics. Not, indeed, that they are essential to cleanliness, but because the antiseptic method, when conscientiously carried out, ensures the purity which is indespensable for perfect safety. The best agent for the sterilization of instruments is probably boiling water, which promptly places any marauding microbes *hors de combat*. It has the premier advantage of being easy of application and of not damaging the steel. "Anti-

septic dentistry" would make a good war-cry, but unless all dentists practice this they will have fallen short of their mission.—*Medical Press.*

MEDICAL CHEMISTRY.

BENZOYL-EUGENOL, OR BENZEUGENOL.

Following up a suggestion by Dr. A. Nannotti, an Italian physician, regarding the use of oil of cloves for the treatment of tuberculous affections, Dr. H. Thoms, chemical adviser of the firm of J. D. Riedel, Berlin, has been working with the object of producing a body or bodies in which the properties of eugenol (the chief constituent of oil of cloves) might be associated with those of other substances which have proved to be of the therapeutic advantage in the treatment of tuberculosis antiseptically. Obviously, oil of clothes is far too irritating for subcutaneous injections, so Dr. Thoms aimed to get neutral compounds of it which would split up in the system. These he has found in benzoyl-eugenol and cinnamyl-eugenol. The former is obtained (*Pharm. Centralhalle*), by a process which is patented, in colorless and odorless crystals with a slightly bitter taste. The crystals melt at 70.5° C., are scarcely soluble in water, but dissolve easily in hot alcohol, chloroform, ether, and acetone. The body is neutral, and gives with concentrated sulphuric acid a purple-red color. *Cinnamyl-eugenol* is odorless, colorless, and tasteless. The crystals melt at 90° to 91°, and behave like the benzoyl compound towards solvents and sulphuric acid. It would appear that these bodies resemble benzosol (benzoyl-guajacol). At present their therapeutic properties are under investigation.—*Chem. and Drugg.*

PRODUCTION OF CURARINE.

Laborde and Meilliére point out (*Rep. de Pharm.*) that the alkaloid of curare is characterized by its insolubility in most neutral menstrua, but is soluble in water. The commercial article is a perfectly pure and colorless extract, which contains two other alkaloids besides curarine. These have the same solubilities as the latter, but differ from it in their physiological action. They are distinguished from curarine by the varying rapidity with which their dialysis is effected. Curarine by itself passes over in a double salt of zinc and cadmium, which may be decomposed by sulphuretted hydrogen. The alkaloid is then purified by boiling in 80 per cent. alcohol. It may be obtained in a less pure condition by extracting the curare with chloroform, to which has been added a certain quantity of carbolic acid.

NEWS AND MISCELLANY.

THE FIRST COLORED FEMALE DOCTOR.

Novelties in the way of doctors *quoad* race, sex, sect, condition, etc., have become somewhat rare of late. We have recorded the evolution of the first Chinese doctor, the first female homœopathic doctor, the first lady medical Brahmin, etc. Despatches now furnish us with the report that the first colored lady medical doctor has just passed the Alabama State Board and is qualified to practice medicine. The reports are modest in that the doctress is said to have passed with simply a high average. We trust that Doctress Dillon will be successful. The colored physicians whom we have met have been modest, earnest, and industrious, and they have shown better than many others the capacity for progress of their race.—*Med. Record.*

THE MISSISSIPPI VALLEY MEDICAL ASSOCIATION.

The 17th annual session was held at St. Louis, October 14, 15th and 16th, 1891, President Dr. C. H. Hughes, in the chair. The attendance was large, the papers numerous and valuable. Dr. I. N. Love, the incomparable chairman of the Committee of Arrangements, and his able assistants, deserve unstinted praise for their provision of receptions, rides, dinners, suppers, banquets, fine weather and full moon. Dr. C. A. L. Reed, of Cincinnati, was elected President, Dr. E. S. McKee, Cincinnati, re-elected secretary; Dr. C. S. Bond, Richmond, Ind., 1st Vice-President; Dr. J. H. Stucky, Lousville, 2nd Vice-President; Dr. Joseph Ransohoff, Cincinnati, Chairman Committee of Arrangements. Place of meeting, Cincinnati, Oct. 1892.

ARE DRUNKARDS RESPONSIBLE FOR CRIMES COMMITTED WHILE UNDER THE INFLUENCE OF ALCOHOL?

Much has been said upon this subject of late, and most that has been said has been in the negative. The affirmative have, as a rule, thought reply not necessary, and yet

the observing must have noted a growing tendency upon the part of the alienist to regard the drunkard as irresponsible for acts committed while drunk. In his seventeenth annual report of the Cincinnati Sanitarium the eminent superintendent. Dr. O. Everts, makes the following timely remarks:

Common sense and common law (which is but an expression of common sense tested by experience) hold men responsible for remote, as well as immediate, consequences of criminal acts. No man is permitted to plead his own wrong in mitigation of his offenses. Common law, and common sense, recognizing intoxication as a vice, hold inebriates responsible for crimes, although committed while incapable of self-control, and oblivious to the consequences of their acts. The school of neuropathic doctors who recognize all of the antecedents of inebriety to which it is sequential as pertaining to disease, holds inebriates irresponsible for their crimes, as they were from the beginning incapable of resisting their morbid appetites, or doing otherwise—unaided—than to become drunkards. Whatever the logic of such inferences, sustained by whatever facts, it is not probable that such extreme views of the irresponsibility of drunkards will ever generally obtain. Society—that co-operative condition of mankind, in which the rights, or necessities, of the many are recognized as superior to the rights or necessities of the few, in the interests of which laws are made and executed; the necessities of which constitute the only rational criteria of the responsibility of man to man—can not afford to exempt a class of offenders from responsibility, whether sane or insane, while they are, at the same time, exempt from legal restraint, because of alleged infirmities. Necessity is not often sentimental.

MEDICAL LEGISLATION AND MEDICAL EDUCATION.

At a recent meeting of the Faculty of the Marion-Sims College of Medicine, the dean, Dr. Young H. Bond, introduced the following resolutions, which were unanimously adopted:

WHEREAS, the position taken by this college upon the two questions of medical legislation and medical education has been intentionally confounded; and

WHEREAS, notwithstanding the fact that, at the last meeting of the Missouri State Medical Association, the report on medical education offered by Dr. McAlester, and having as its central idea a three years graded course of lectures, was, on motion of your dean, with the aid of the votes of all the members of this Faculty then present, adopted, it has been sought to have it appear that this college is not favorable to higher medical education; therefore, to the end that our position upon the question of medical education be clearly understood, be it

Resolved, That after the session of 1891–'92 the Marion-Sims College of Medicine will exact as a condition to graduation in medicine of all its students, who may not have previously matriculated attendance upon a graded course of lectures extending over three years. And be it further

Resolved, That our position upon the question of medical education does not in the least abate or compromise our objection to what we regard as the attempted enactment of unjust, inefficient and class medical legislation, and that this Faculty favors an examining board as the fair and rational solution of the problem of medical legislation and medical education as well.—*Memphis Med. Month.*

THE YANKEE MEDICAL STUDENT.

Our English contemporary, the *Hospital Gazette*, states that the Yankee medical student has not very much to be thankful for. First of all, the medical "diploma mills" turn out their thousands of ill-trained and indifferently educated youths to take part in the professional struggle for existence, and then no kind legislation has interfered for the purposes of restricting the practice of medicine to native graduates. His woes, therefore, are tangible, but now Mr. McKinley has got passed a tariff, in virtue of which the tax on microscopes has been raised sixty per cent., so that an instrument which costs ninety dollars in Germany will at wholesale cost one hundred and fifty dollars in the States. This will hardly have the effect of stimulating microscopical work, and the cost will, of course, increase *pari passu* with the minuteness of the object to be magnified, seeing that the higher the power the greater the initial cost and therefore the more crushing the protective duty.—*St. Louis M. and S. Jour.*

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Clinical Lecture.

SUPPURATIONS OF THE HAND AND FOREARM.

BY PROF. LE DENTU.

DELIVERED AT L'HOSPITAL NECKER.

Gentlemen: I will take the opportunity to speak to you on a practical point of the greatest importance. You have seen me make an incision on the forearm of a woman, 42 years of age, occupying a bed in the Lenoir ward, and each one of you, perhaps, has been astonished at seeing me cutting not only the superficial layers, but penetrating deeply into the muscles of the forearm. It was there that I found the seat of suppuration.

The history of this patient is quite simple. On the 19th of May she was pricked on the thumb by a corset steel (notice the date for it is only eight days ago), and she was satisfied with wrapping the injured finger in a rag moistened with arnica. On the following day she began to experience upon the thumb sharp pains which soon extended to the forearm, and finally the elbow. When she entered the Hospital, four days after the accident, there was established, beginning at the point of the original lesion, an œdematous redness extending along the palmar eminence and upon the dorsal portion of the corresponding hand, as far as the forearm. The œdematous swelling was considerable and the pain so acute that, in order to relieve this, I had to make an incision upon the dorsal surface on the level of the commissure between the thumb and the index finger, but without success, as I found no pus there. Neither this procedure, nor the bathing of the arm and the antiseptic dressings applied, produced any relief in the intense sufferings of the patient. Moreover, the fever persisted and yesterday I found signs of a deep inflammation of the forearm. There was noticed only a slight redness, but the inferior extremity of the forearm presented a cylindrical form and a clammy condition. Upon the anterior surface, about two fingers' breadth above the wrist, I felt a deep fluctuation. You have seen me chloroformize the patient and give exit to the purulent collection which occupied all the muscular space opposite the pronator.

I will now take occasion to give you some ideas about suppurative inflammations of the wrist and forearm, a very interesting study, one which has not of late been examined thoroughly. Among the authors of the beginning of the present century, Boyer for example, none has devoted a single chapter to suppurations of the hand, although Berard, in his dictionary, has given a short history of the subject. Velpeau, however, was the first to make a good study.

From the time of Bauchet two types of the disease have been recognized: a clear, phlegmonous form; and the second, no other than a synovitis of the tendinous sheaths. This is probably the first time in which a difference has been established between an inflammation of the tendinous sheaths and that which is developed otherwise.

Regarding the study of deep phlegmons, Dolbeau, about 1867, introduced in a general way a new idea, that of lymphangitis. He would explain how from a wound of the wrist or hand, wherever situated, the infectious products (to-day we speak of them as microbes) would be absorbed by the lymphatics and arrested at the point where the future phlegmon would appear. This is the pathogenesis admitted to-day with regard to the origin of adeno-phlegmons. As in an instance in which we may have first a simple adenitis, then a ganglionic phlegmon or an adeno-phlegmon, so in the case at present under consideration, there was at first a lymphangitis, followed by a peri-lymphangitis in the cellular tissue. I may not be perhaps entirely justified in speaking of a

lymphangitis of the forearm, since Sappey has described along the path of the deep lymphatics of the forearm small ganglia which are sometimes rudimentary, presenting an appearance of confluent lymphatics, and it may be that the deep suppurations referred to are nothing else but adeno-phlegmons of those ganglia. However, this being a matter of hypothesis, it seems to me that Dolbeau's theory relative to deep abscesses being the result of a lymphangitis, is true on the whole. Nevertheless, I am obliged to act reservedly regarding a broad generalization of such a theory.

This theory has been combated especially by Gasselin who has endeavored to demonstrate that suppurative synovitis of the hand is of a primary nature, whereas Dolbeau considers it as a secondary manifestation. Gasselin bases his arguments upon certain facts. The principal of these is the description he has given in one of his clinics of the hand of a patient who died from the results of a phlegmon caused by a puncture of the little finger. On post-mortem examination a suppurative inflammation limited to the sheaths was found. To this argument Gasselin adds that the theory of Dolbeau cannot be demonstrated from an anatomical point of view. Now, this is true, but it is precisely one of the characteristic features of lymphangitis to exhibit the seat of suppuration far from the primary lesion, and we do not hesitate in attributing to a lymphangitis an abscess of the axilla, coming on several days after a wound of the hand. The second objection of Gasselin is that these abscesses must be situated along the passage of the radial and ulnar arteries, because it is through such tracks that the principal lymphatics go. Again, not only can it be seen that the abscesses follow these paths, but it must not be forgotten that lymphatics accompany interosseous vessels, and they are precisely the ones that are found to be affected. Finally, Gasselin has remarked that these phlegmons are always observed after lesions of the thumb and little finger. Now, this assertion is too absolute, and if in our patient the wound is situated on the thumb, it is remarkable that it should occupy the dorsal face of the first phalanx. In regard to tendinous stiffness and consecutive adhesions, these are probably due to a plastic synovitis of a secondary nature, similar to that observed in carpal and digital articulations.

We will admit, then, two forms of suppuration of the hand: the primary suppurative synovitis and the lymphangitis with a distant abscess. I will endeavor to show you how to make, from a clinical point of view, at least in a certain number of cases, the diagnosis between primary synovitis and lymphangitis.

The first and most important thing to consider is the seat of and nature of the lesion which is the starting point of subsequent troubles. I will recall to your minds that the external carpo-phalangeal synovial sac sends a prolongation to the end of the flexor of the thumb, and that the internal carpo-phalangeal synovial sac sends a similar one to the head of the first phalanx of the little finger. Thus, the deep lesion bearing upon the palmar face of these two fingers must be due to a direct wound of the synovial sac. A second valuable sign is the *position of the fingers*, which is somewhat characteristic. In cases of synovitis they always bend towards the palm of the hand, this flexion becoming more and more pronounced. On endeavoring to extend the fingers more or less forcibly, an extremely sharp pain is produced, and sometimes, at the beginning of the disease, a kind of starchy crepitation is perceived. This phenomenon is of short duration and not of frequent occurrence in suppurative synovitis; it shows the existence of a plastic exudation, which is rapidly followed by suppuration. It is much more frequently observed in the primary synovitis, without wound, particularly in the rheumatismal and blenorrhagic forms of this disease. You must also look for the pain produced by simple pressure, limited to the anatomical direction of the sheaths, at least during the period which precedes that of pus formation, When a liquid exudation supervenes, a fluctuation is established which still remains, generally, limited to the region of the sheaths.

On the other hand, let us examine the signs of a lymphangitic phlegmon. I have told you all about the wounds in the case of synovitis. If, therefore, instead of a deep lesion you come across a simple excoriation situated on the dorsal face or the lateral side of any finger, you may be justified in thinking of having to deal with a lymphangitic phlegmon. The deformity of the fingers appears in a less rapid manner; it is possible to extend them at the onset of the affection, but later their condition assumes a similar character to that of the previous form described, since, unfortunately, there may come a certain degree of synovitis.

With regard to the œdema and the swelling, I may remark that in the case of lymphangitis, they are more diffuse and tend

rapidly to invade the dorsal surface of the hand.

The principal seat of suppuration is the interdigital space, especially the first one if the point of entrance is at the index finger. At this point the infiltration may be abundant, and as the fluctuation is apt to be deceiving it is well to verify it by practising an exploration. The œdema is very diffuse.

In a lymphangitic phlegmon the suppuration comes on in a very irregular manner, and is apt to appear at any point. Frequently, it makes its appearance from the start on the dorsal surface. On the anterior region it is developed in the connective tissue surrounding the median nerve, but it does not stop here, for it is rapidly diffused along the origin of the last four fingers. At this period it is difficult to make a differential diagnosis, for the same thing occurs in cases of synovial abscesses which rapidly invade the connective tissue, and at a period somewhat advanced of the two varieties of inflammation the suppurative focus occupies the same limits. In synovitis, however, the passage of the pus above the wrist is almost inevitable and shows itself from the very beginning.

I must here insist on the manner of searching for the fluctuation. You must bear in mind the duration of the malady. As a general rule it is rare for the pus to occupy a circumscribed spot before the 16th or 18th day; nevertheless, in synovitis where the cavity is already formed, the abscess may be formed about the 3d or 4th day. Remember, there is no region where the œdema resembles a fluctuation so much as in the hand, particularly in the space that separates the index finger from the thumb, for at this place the skin is loose and is easily raised by any infiltration. When it is necessary to find out the existence of pus above the wrist, an exploration must be practised in a certain manner, as the thumb in such cases plays an important role. You place one of your own thumbs transversely above the wrist, and the other lengthwise on the palm of the hand. Let me remind you that pressure must be exercised in such a manner that a pushing sensation is felt from within towards the surface. But in the present case, this transmitted sensation is not easily produced because the pus can with difficulty pass through the narrow canal that lies between the two suppurating foci.

In the case of our patient, this manœuvering does not aid us in establishing the existence of any focus in the palm of the hand, but only a collection in the forearm. On placing my two thumbs transversely above the wrist, at a distance of three fingers' breadth from each other, I feel a deep fluctuation. Add to this that there exists a superficial redness and an œdema on which the thumb leaves an impression. Besides, there is a sharp pain produced, and a feverish condition (39° C.,) is likewise present. Sometimes, at a period when the collection of pus is complete, there is a sufficiently marked stoppage of the pain and other general symptoms. This phenomenon cannot be considered as indicating a resolution of the phlegmon. For a different reason it is but rarely observed in the hand, because the palmar aponeurosis by its resistance maintains a tension of the tissues.

I have now arrived at the consideration of the treatment of the different varieties of phlegmons of the hand. The indications for interference in such cases may be divided into three periods. At the outset, or first period, about the tenth to the thirteenth day, if, fortunately, you are immediately called, begin by practicing an incision and disinfecting the part that has been the starting point of the infection. Antiseptic baths for the hand and forearm produce the happiest results. I am in the habit of using a solution of carbolic acid, not stronger than 1 to 400 because I have found that a concentrated solution is apt to produce erythema and sometimes a vesicular eruption. There is another treatment which at the present time is but little followed, but which, nevertheless, should not be entirely laid aside. I have reference to local bleeding. In certain cases this may bring about a resolution of the inflammation, and when you have to deal with a phlegmon that is not accompanied with serious symptoms, and which does not require an immediate interference before the 10th to the 13th day, you will find this method of local bleeding of great utility, especially when aided by the application of leeches over the wrist. As to dressings, cataplasms must be prescribed in order to keep the wound or wounds well covered. You may with propriety use muslin compresses dipped in a solution of corrosive sublimate, of the strength of 1 to 2000, or of boric acid of the strength of 30 to 1000, to which a little laudanum may be added. You must be careful to see that the dressings are sufficiently large to cover well the inflamed parts, placing over those dressings sticking-plaster or rubber so as to keep them moistened till evening or until the following morning, when you must renew them.

During the second period, or that of sup-

puration, you must abandon all local bleeding. You will still use antiseptic bathing as this will continue to produce excellent results, but the time has now arrived when the bistoury must act. When and in what manner exactly is the instrument to be employed? This is more a question of topographical anatomy, and I must refer you to a special treatise on the subject.

The principal dangerous obstacle to be met with is the superficial palmar arch which you will remember is situated a little above the middle fold of the hand. Sometimes it may be of an abnormally large size. Do not, therefore, make an incision on the level of this fold. Incise either under this fold in the inferior part of the hand, or above a line which is prolonged from the hand along the internal border of the thumb. Always incise in a vertical way, because the inferior portion of the hand lies parallel to the collateral arteries and nerves of the fingers, and if you should happen to be in the superior portion of the hand you must be careful not to injure the median nerve. Taking all this into consideration, after you have divided the palmar aponeurosis, replace the bistoury by a convenient drainage tube. I will point out to you particularly that on the dorsal surface of the hand, on the first interosseous space, the trunk of the collateral arteries of the index finger and thumb, and which arises on the level where the radial artery perforates that space, is sometimes very long and often very bulky and short—circumstances which increase the danger of cutting it. If such accident occurs you must secure the two ends of the vessel severed.

When you are called to interfere in the third period, you are, unfortunately, obliged to deal sometimes with a hand that has been transformed into a sponge impregnated with pus: the sheaths are everted or open; the carpal articulations are filled with matter and produce, on moving, a cracking noise; and all other functions are abolished. In such cases amputation is indicated; but this is a necessity which ought not be decided upon too hastily. In all instances, as in those in which early interference is resorted to in order to limit the inflammation, an adequate treatment should be adopted with a view to avoid tendinous and articular stiffness, which, if such cases are abandoned to themselves, may be the cause of permanent infirmities. Therefore, you must prescribe aromatic bathings and massage. You should apply forcible movement to all articulations. Sometimes you will have to work against the coming on of these sequelæ for a period varying from two to six months.

COMMUNICATIONS.

CITY STREETS AND THEIR RELATION TO PUBLIC HEALTH.

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The relationship which a city's streets and passage ways have to the health of its inhabitants has received some consideration in the past from sanitarians and students of preventive medicine, but not, by any means, all that it deserves. Though it may not be a reason for this neglect, it is a grave fault that in most large cities the interests of the contractor are more looked after and cared for by those in authority than is the welfare of the tax-payers and citizens; and that it is almost impossible to have what promise to be beneficial improvements fairly tried when these tend in any way, as they often do, to decrease the financial profit to those actively interested in "the job."

A change for the better, however, is beginning to be noticed in some, especially in our western cities; and perhaps it is not too much to hope that the time is coming when our municipal authorities may think *first* of those who have raised them to power, and lastly, if needs must be, of the pockets of their intimates and followers. I say nothing of the greater hope that all this class of "city fathers" may some day give place to men who will have at all times the best interests of their city and people at heart, for that requires almost an excess of faith and patience.

The field and work which the avenues of a city, from the grandest to the meanest, offer to the sanitarian are broader than one would at first imagine them to be; and it is only to touch upon a few of the points that may be considered that I venture to offer the following notes:

It goes without saying that wherever the business life of a city is most active, in that vicinity will the value of land be high, and there will then be a tendency to make the streets and alley-ways as narrow as possible and the buildings on either side of them as

high as the law or the purses of the owners will allow. Another locality where the same narrow passage-ways and high buildings prevail will be the tenement districts, even though somewhat distant from the "busy marts of trade", for here the greedy and unrestrained landlord will try to extract as high a rent from as little space as he may. It is only as we go further away from the heart of a city and among those of a better condition than the very poor that the streets become wider and the air spaces greater about individual buildings and dwellings; but in many places it is only among those who are really well-to-do that the streets have the width they should have and that there is fair opportunity given for ventilation and the access of sunlight, two of our most powerful agents in the prevention of disease.

On *a priori* grounds, then, we should consider the conjunction of high buildings and narrow streets to be effective agents for evil against the health and vitality of the dwellers therein.

The younger Parkes says: "The health of a town largely depends on the width of its streets, the general heighth of the buildings, and the amount of yard space at the rear of each which separates it from its opposite neighbor. Contrast the health and vitality of the occupants of houses in wide open streets, with those who live in narrow courts closed at one or both ends—the courts themselves being often surrounded by higher buildings, or built back-to-back, or with the smallest possible intervening space. In such places the air is almost always necessarily stagnant, as the passage of the wind is obstructed by the surrounding buildings. The sun's light for many months in the year cannot penetrate, with the result that the ground is never thoroughly dried, and the air in contact with it remains continually damp. Impure gases and exhalations, evolved from the inhabited dwellings, are not at once swept away by the wind, and consequently accumulate in the air of the court and its surroundings. Suspended organic matters tend to subside in the still air, which being thus both damp and impure, produces that state of low vitality and predisposition to disease that characterizes the inhabitants of such places.

Zymotic diseases, when once introduced, spread rapidly through the vitiated air; the enfeebled constitutions of the inhabitants presenting but slight resistance to their onset. Absence of sunlight appears to have a specially injurious effect on child life, which like plants, becomes blanched and weakly when reared in semi-darkness. When it is added that in many of these courts and alleys the houses have no thorough ventilation, the windows being only in the front of the house, it is not to be wondered that the general death rate is sometimes double or even treble that of the healthy parts of the town, and that the mortality amongst infants and young children is something appalling."[1]

Looking to the facts, we find that comparatively few have investigated this matter, but that the results already obtained are, to say the least, striking.

In England Ransome, Barry and Smith have all investigated the relation of street width and town ventilation to the mortality from phthisis, and in this city (Philadelphia) Drs. Flick and Howard B. Anders have made valuable contributions to our knowledge of the subject. Perhaps I shall economize space and time if I review briefly the article of Dr. Anders on "Street Width": Its causal relation to the mortality of phthisis,[2] and make use of some of the quotations from the other writers of which he has availed himself. He says: "In order to demonstrate whether any relation, positive or negative, existed between street width and the mortality rate of phthisis in Philadelphia, I began a topographical study of such cases in the Fifteenth Ward which died during fifteen years, from 1874 to 1888 inclusive. For the basis of the research this ward was selected for several reasons, as follows: 1. Because of the large number of deaths reported; 2. On account of the streets, typically very wide, narrow and medium in width, which it contains; 3. Its elevation and its proximity to Fairmount Park, circumstances which would convey double force to a positive relation between a high mortality rate from phthisis and narrow streets in that vicinity; 4. A great number of streets running diagonally to the main ones; 5. A proportionably larger population in the wider streets; 6. The presence of several large penal institutions." The area of the ward is about one square mile. The Board of Health records for the time in question were carefully examined, and doubtful cases traced or eliminated till there were left 1665 authentic ones, or 94 per cent, of all recorded."

A large map of the ward was then made, and the aggregate number of deaths for each block transferred to this map, on close study of which, thus completed, Dr. Anders ob-

[1] Practical Hygiene, page 228, Blakiston, 1890.

[2] Vide University Medical Magazine, October 1890.

serves: "That the number of deaths from phthisis on a very wide street is proportionately small compared with almost any one narrow street." Taking the streets running east and west which are forty feet or more in width, and excepting two of them which have but little back ventilation to their dwellings, owing to other buildings close in the rear, the average death rate per square for the time given was 3.7; while that for the streets under forty feet wide with the same direction was 6.1 per square. Doubtless the same ratio holds good for those streets running north and south or diagonally, for there is no reason why it should not.

Again, "A large mortality in the narrow streets near the Park (Fairmount) is particularly significant, for it points out that though a better atmosphere be near at hand, if not freely accessible for ventilating purposes it avails nothing."

"The observations show that there is plainly and generally a high mortality rate from consumption associated with street narrowness in not a small part of Philadelphia. From the assumption then of the well-known fact that the major portion of the city's population lives in narrow streets, (although this is not true of the Fifteenth Ward), and from the fact, as before proven, that the death rate from phthisis is relatively high among these residents, the conclusion is logically justifiable that the relation between a high mortality and narrow streets is a positive and vital one."

If this be true of Philadelphia, that boasts of having more individual *homes* for her population than any large city in the world, what may we expect of those places where the great mass of the poorer classes dwell in lofty over-crowded tenements whose entrances and outlooks are only upon courts, alleys or streets so narrow that the sun can scarcely light up the depths for more than an hour or two a day, and where a breath of fresh air is a thing almost unheard of and unknown?

Ransome finds the same relationship between a high phthisis mortality and narrow streets in English cities, and Barry and Smith have shown that this same mortality in "back-to-back" houses is high, something that Anders also noted in his work.

If, as Dr. Flick says, "the same conditions which intensify the contagion of the diseases long acknowledged to be contagious, increase the operation of that of phthisis," is not the converse likely to be true, and where we find the mortality from phthisis high may we not also expect a high mortality and morbidity from all the contagious maladies common to the locality?

I know that it can be reasonably and strongly urged that those who dwell in the narrow streets and by-ways of which we have been speaking are especially subject to those other conditions which lower vitality and predispose to high morbidity and mortality from any cause; viz., poor and insufficient food and clothing, exposure to inclement weather, unhealthy occupation, etc.; but still, those of us who believe at all in ventilation for our dwelling rooms and houses, must admit also its necessity for our streets. "The free course of pure air through *wide, unobstructed streets* is as clearly necessary for the proper ventilation of cities as it is for the ventilation of habitable rooms. Indeed, without the former the latter would be certainly incomplete and defective. Streets are the ventilating flues of cities and they should be ample in width."[3]

Knowing the evil, what remedies are to be proposed? It is evident that these must vary with the conditions present in each case. However, they may be formulated somewhat as follows: In those business portions of a city where property is high in value, where the buildings are for commercial purposes, and where the street width is necessarily limited, the proper authorities should see that in all buildings ample provision is made for abundant ventilation, the air being brought from a reasonably clean place, for proper room-space for the occupants, and for the prompt removal of all collections of waste matters deleterious to health; and these requirements should be maintained by frequent and strict inspections. Many occupations now considered unhealthy would not be especially so, were the ordinary laws of Hygiene fairly observed by those having in charge the care and oversight of the place in which the work is done.

The same rules should be applied in those localities where tenements abound and where the streets are already narrow and cannot be widened; but no new buildings for tenement purposes should be permitted on these streets, or, for that matter, on any other, unless they are planned in accordance with the latest and most approved sanitary laws.

All new streets are to be laid out as wide as possible, even at the sacrifice of personal

[3] Anders: loc. cit.

or private interests; and, above all, the people should be instructed as to the value of individual homes with as much air-space about them as possible, and to be encouraged in obtaining such homes as permanent residences; this not only for sanitary reasons, but also for the moral effect upon them as citizens. Proper legislation and municipal care for the interests of the laboring man can also do much toward making him feel secure in his property rights and giving him an interest in the city's health.

In this connection it may be well to quote from the model by-laws of the Local Government Board of London; "The width of every new street intended for use as a carriage road must not be less than 30 feet; if saving narrow, filthy ways and alleys with foul not to be used as a carriage road it must be at least 24 feet wide, and open at one end. Twenty-four feet is the least width allowed before the frontage of any new building; and the aggregate amount of yard space at the back of such a building, and belonging to it, must not be less than 150 square feet, and whilst extending the full width of the building it must not in any case be less than ten feet wide, and must be wider when the height of the building exceeds fifteen feet, the yard space at the back of the house being increased with the height of the house up to thirty-five feet."[1]

Street cleanliness. This will evidently depend on two factors; the character of the street pavement, and the thoroughness and frequency with which the contracts for street cleaning are carried out. It goes without saying that a street pavement should be as smooth and durable in its character as is possible to secure with due regard for true economy. Experience has gradually narrowed the choice of the materials of which a much used city pavement may be made to the granite or Belgian blocks, to asphaltum, and of late years, to vitrified bricks. Of these I suppose the Belgian block would naturally be selected by most persons as the most serviceable for use in the business portion of a city and where the traffic and traction were especially heavy, relegating the other materials to use only in that part given up to residences or where traffic is light. However, it is questionable whether the asphaltum and brick, will not be found to be equally serviceable for all localities, *if they be properly laid*, inasmuch as the traction over them is so much easier than over the rougher granite and the wear and tear consequently so much diminished. Certain it is that the vitrified brick, after being exposed under fair conditions to the severest tests, has agreeably surprised its warmest advocates.

Should it happen that one or the other of the two smoother ones may in time be substituted for the rougher one of the three, a gain in sanitation will be made in more ways than one. It will be much easier to keep the streets in that condition of cleanliness in which they should be, but which is so rarely to be discovered. Then more of the population, especially of the sedentary classes, will be encouraged and induced to make use of the bicycle, the poor man's horse, and to gain benefit from the physical exercise that otherwise they would lose. The rumble and noise of street traffic that goes to make up the roar of a great city would be considerably lessened, and this, unnoticed by the healthy, would be a true relief to those sick whose nerves are hypersensitive and acute to disturbances usually thought of little moment. Other benefits accruing from smooth pavements might also be adduced, but coming back to the question of cleaning them, it will at once be seen that the cost of doing this must be greatly lessened, and that there can be no excuse for any neglect of duty by those to whom this very important duty is entrusted.

Dr. Feltz[2] has shown that the virulence of tubercular bacilli mixed with dry road dust and exposed to the variations in the atmosphere lasts months, especially if also exposed to the sun; and who can doubt that the moist filth remaining for many days and weeks on the surface of streets is not also a most excellent breeding ground for the germs of many other contagious diseases? And then, when the sun dries up this filth and the wind scatters and sifts it through all our dwellings, who can tell what an assortment of maladies he may have latent within his very threshhold?

The experience of foreign cities, and even of some within our own borders, notably Washington, shows that there is no necessity for dirty streets, and our citizens should no more tolerate them, through neglect of their paid servants, than they would a like condition of their dwellings or business houses. It is too often the custom for the contractors for street cleaning to practically sub-let the whole job to Jupiter Pluvius, and the latter, not receiving any of the spoils, is apt to take things easy and to do

[1] Louis Parkes, Practical Hygiene; loc. cit.

[2] Vide Therapeutic Gazette, June, 1891, p. 410.

his work only at long intervals. Fortunately, when he does act, the work is generally well done. A grave part of the neglect is that those parts of a city which need the streets cleaned worst are the last to receive it, if at all, and that that part of the population least able to resist the depressing causes arising from street filth is the one most exposed and the part that suffers most.

The sub-soil of streets. It is proper that the condition of the soil underlying city streets and of the air which it contains should be considered in this connection. When we remember that there is almost always considerable leakage from both illuminating gas mains and sewers in their course, we realize that both the soil and soil-air of even a comparatively new street may soon become dangerously filthy. If to this leakage be added the percolations from above for many years through pavements imperfect or in need of repair, and especially in such localities as those where masses of filth lie moist and decomposing for days and weeks, (which conditions, I need not say, exist too often in tenement districts), the danger to the health of the people becomes more real and powerful. One need but pass along such a street when repairs are being made to some of its mains or drains and the soil is upturned for the time to have made patent to his senses how foul such soil can be; and city doctors know that such upturnings, if extensive, are often followed by serious outbreaks of sickness. But they rarely stop to think what a continually depressing factor this foulness is, even when street surface is unmolested and in good repair.

Owing to the extremes of atmosphereic temperature there doubtless is a continual movement of the soil air underneath the street. If, as in the crowded or closely built portions of the city, the sidewalks reach from house to curb, with no intervening grass plot, there can be practically no escape of the soil air upwards, nor ingress of fresh air from above, and whatever ventilation the sub-soil has must be through the basement walls of the buildings and dwellings on either side. This goes on throughout the year, but especially through the colder months, for when the fires are lighted and the air of the houses is thus made lighter than that without, the sub-soil air with its foul gases finds ready access through every opening in the cellar wall or floor. Even, as Prof. Dixon has pointed out, when the cellar walls and floors are well cemented to exclude the soil air, it will often be found that the space beneath the hot air furnace has been left unprotected and that there will be found a strong up-current from the underlying soil. Will not such a condition of affairs explain the existence of many cases of insidious disease, marked by the symptoms characteristically produced by "sewer gas," and which lasts during the winter months and disappears as the fires are allowed to die out in the spring? It seems to me that much may be done to improve this condition of the sub-soil and to remove the danger that is by no means imaginary. On the part of the city it should be a duty to lay all gas mains and sewers in as careful a manner as possible, that there may be a minimum of leakage from them, and where practicable, to *drain* the sub-soil by conduits *separate* and *distinct* from those carrying the house sewage. This is one of the excellent features of the Waring, or "separate" system of sewerage, and is worthy of consideration wherever new sewers are to be introduced.

On the surface there should be, if at all possible, somewhere between the curb and the house line, a strip of grass or uncovered earth, to allow of a free ventilation of the sub-soil and thus, in a measure, dilute and purify the the soil air. Enclosed spaces of grass or flowers at the intersections of convergent streets would also have a sanitary as well as an æsthetic value. On the part of the house-owner it is necessary that he should see that his cellar walls are as impervious to the entrance of soil air as he can make them, not forgetting the space underneath the furnace; and he should also take care to bring in from some *clean* place above the level of the soil an abundant supply of pure air to thoroughly ventilate the whole house. He should also keep the surface of the earth about his house at all times in as clean a condition as possible.

As to the surface of the street pavement, it should, of course, be kept smooth, in good repair and *clean*. Neither the Belgian blocks nor asphaltum will allow much, if any, ventilation of the sub-soil. I am inclined to think that the new brick pavement will, for while the bricks are called "vitrified," they are porous and allow the passage of both water and air through them. This, then, is an advantage over either of the former materials, and should lead them to to be used in narrow streets, where there can be no side ventilation. Though porous, there need be no fear of filth percolating through them, if the streets be kept decently clean as they should be; as intimated, their

very porosity helps to both dry and ventilate the sub-soil air and lessen the danger from the foul soil air.

The relationship between the curb and the house— or building—line must vary in different parts of the city somewhat as does the width of the streets. In the business and closely built portions of a city the necessity of room for traffic requires the roadway to be as wide as possible. But in localities given up to the better class of residences and where the streets are really of a good width, there is sometimes a tendency to make the improvement too broad in comparison to the space allotted to the sidewalk. This is of little importance if the buildings generally are back of the legal building line; but where they are flush with the latter, trees planted between them and the curb will interfere with ventilation and access of sunlight to the house-front, and there will also be lessened space for the soil ventilation between house and curb, especially if the sidewalks be of the regulation width. It will rarely be advisable that the roadway be over forty feet broad and in most cases where there are no street car lines thirty-five feet will be even a better width. This will allow the shade trees to be planted far enough away from the house-front to have good ventilation and light, and at the same time the general beauty of the street is enhanced.

There are certain other conditions that may arise which might influence for evil the health of the dwellers on any given street, but I believe that a study of the foregoing ones will convince the reader that they are general, and that their influence is certainly positive.

It cannot be gainsaid that with wide, *clean* streets, well-drained and well-ventilated, both above and below the surface, supplanting narrow, filthy ways and alleys with foul and reeking sub-soil, the general health of a great part of the population of any large city would be vastly improved and the city's morbidity and mortality greatly lessened. When we consider that bringing down the death-rate only one in a thousand means the ing of a thousand lives a year in a city of a million, we realize how great the responsibility is of those to whom are intrusted the sanitary duties of a great muncipality Even looking at the question from a financial standpoint alone, the gain in the earning capacity of the people would more than cover any increase in expenditure necessary to clean and well-paved highways, drained and ventilated as they should be. Is it not worth while for every tax-payer and citizen to demand that he shall have these reasonable and rightful benefits from the city in which he dwells?

CLINICAL OBSERVATIONS OF ACETANILIDE,*

BY DR. J. R. CARE,
CENTRE POINT, PA.

Acetanilide, unlike most of the more recent preparations of the chemist which scintillate with great brilliancy for a short time in the medical press, and are then relegated to oblivion, has now a permanent place, and deservedly in the list of efficiencient, and reliable antipyretics, although now, almost unnoticed by the laboratory experimentalist.

It is a lamentable fact that there are men, who after a few hurried and superficial trials of a drug during which they receive apparently brilliant results that very often are but the results of nature, hasten to bring them before the profession as fixed facts.

This being well known by the mass of the profession, is it any wonder they become skeptical? Having used acetanilide in a few cases with very satisfactory results, I determined to use it in all cases occurring in my practice with hyperpyrexia, and thus ascertain if possible its merits as well as its demerits.

I used it in a series of twenty-five cases of typhoid fever, in follicular tonsillitis and simple inflammatory fever, and the manifestations were so constant as to warrant the appended assertions.

Like the physicians of the Orient, I first took the drug myself and then administered it to my patients.

It has a slightly pungent taste, causes a sensation of warmth in the stomach by which it is well borne, first diminishes the number and force of the heart beats, followed by rapid, weak and thready pulse, if the dose has been large enough to cause a decided reduction of temperature. It produces in from fifteen minutes to an hour a profuse perspiration, with reduction of temperature of a febrile patient. If the dose has been a decided one, the extremities become cold, lips blue, yawning, somewhat quickened feeble respiration, and a sense of a profound debility in some cases amounting almost to collapse.

It attains its maximum effects in from three to four hours, gradually passing off

*Read before the Montgomery County Medical Society, September 16th, 1891.

thereafter, the temperature ascending to its former height, or nearly so.

The above is observed when the dose is large enough to reduce the temperature from three to four degrees, when the dose is smaller, there is noted the diaphoresis and reduction in the pulse beat and tension without the profound debility mentioned above.

These manifestations were seen in all cases except one in which the drug was used.

The exception was a case of scarlet fever in a boy aged 15 years, who on the sixth day, developed pneumonia with a rapid rise of temperature, and a dry hot skin that failed to yield to the ordinary medicaments.

I gave him three grains of acetanilide every four hours, with no effect on the temperature, or skin. I doubled the dose with no effect. It did produce however, profuse diuresis; the case actually passing seven measured quarts in twenty-four hours, the temperature remaining at 105° until convulsions ended the scene.

In order the more fully to illustrate the foregoing observations I will cite the history of a case in point:

Amy D——, aged 14 years, was taken with a severe chill September 3rd, 1890. We were called three days thereafter and found her in bed with a dry hot skin, tongue moist, and covered with a yellowish-brown coat, temperature 105°, pulse 120, respiration 30, stomach irritable.

I prescribed cinchonidia in capsules, and a febrile mixture.

On the following day her condition was practically the same, the stomach rejecting everything. I then prescribed bismuth and two grains of acetanilide every four hours. The following morning the skin was moist, temperature, 104°; pulse, 110; and a moderate diarrhœa. I then added five grain suppositories of quinine to the other prescriptions and found her, in the evening, with a temperature of 105°.

I had her sponged and on the following day found her the same as the day previous. I then determined to push the acetanilide, and ordered four grains at eight o'clock A. M., in connection with the suppositories, and left directions for the parents to give two grains more in four hours unless she perspired freely. I was hastily summoned at noon to see her, as they thought she was dying. I found her collapsed, extremities cold and bathed in a profuse perspiration; pulse, very feeble, beating 144 per minute; temperature, 99°; respiration, labored, and sighing; eyes turned up; lips blue.

She was very restless. The parents said she had been unconscious and that she seemed to stop breathing. Prescribed hot applications and brandy and found her resting easy in the evening. But the next morning her temperature was up to 103° and as she could retain nothing else on her stomach I ordered two grains of acetanilide, which reduced the temperature and caused profuse diaphoresis in about an hour. I saw her six hours after and found her with a temperature of 101°; mind somewhat confused. The temperature would rise every day and require one or two two-grain tablets to control it, in connection with the suppositories. She complained quite frequently of feeling cold in from two to three hours after the drug was administered. The case continued thus until the 21st day, when the temperature fell to normal.

It ran up to 103 degrees upon several occasions after that. On the 24th day she passed a small quantity of blood—but no urine. There was complete suppression for 24 hours, which was only partially overcome. Clots of blood passed per rectum; occasionally she vomited a black grumous material.

There appeared ecchymotic spots wherever she scratched herself. There was abundant sordes on her lips and teeth.

Her temperature now remained normal and the tongue was clean. Kidneys acted fairly, when on the 28th day, during the absence of the nurse, she got out of bed and walked across the room to the commode, when she sank exhausted. Her mother heard her and ran to her rescue, laid her on the bed, when she gasped and was dead.

It follows that acetanilide is a very potent drug, potent for evil as well as for good. If I have rightly interpreted the fore-going, acetanilide is a powerful cardiac depressant, apparently acting on the heart proper, also on the inhibitory apparatus.

It is a nerve depressant and a fairly certain diaphoretic, as it acted on the sudoriferous glands in all cases but one in which it was used. It seems to interfere with the oxygen-carrying functions of the blood, and consequently diminishes oxidation, which may be a factor in the reduction of the temperature. In my experience it caused profound depression of the vital parts in all cases where the dose was large enough to cause a decided fall of temperature, and the debility remained, consequently I think it is contra-indicated in all casss with marked adynamia In sthenic cases its results were most gratifying.

OBSTETRIC ANÆSTHESIA.

BY DR. J. B. CARRELL,

HATBORO, PA.

The editorial on "The Choice of an Anæsthetic in Obstetrical Practice" in the October 10th REPORTER, particularly attracted my attention and prompted me to write a few thoughts on this important subject.

Having employed chloroform extensively in my obstetrical practice I can say that my experience supports the views given in the editorial, that "chloroform is justly considered the agent *par excellence* in producing obstetrical anæsthesia.

It is my custom to administer chloroform in obstetrical cases, to relieve pain, to relieve extreme nervous irritation, and to relieve rigidity of the os and perineum. He who can calmly stand by a woman and see her suffering the excruciating pains of childbirth, and not assuage those pains, has a heart destitute of that beautiful sympathy that every physician should possess. I can not agree with the sentimentalist who argues that woman should suffer because nature has said so. That her mental faculties should not be clouded so that she can not enjoy the "caresses of her husband, the condolence of her relatives and deaden the imagination, already teeming with the joys of maternity?" That she should "not be deprived of the ineffable happiness of hearing the first cry of the new born child?" This joy I attribute more to her thankfulness in having passed safely through the perils of childbirth than the, to me, cold and cruel sentiments.

In the face of accumulated evidence which conclusively shows that the dangers of not giving this agent, in painful cases of labor, are greater than the giving, I can not see why it should not be given. It has been proven by actual experience that no ill effects result to the mother from its use. Writers are nearly unanimous on this point, and many hold that the recovery is more rapid and surer after its use. Undoubtedly there are many physicians who can trace the origin of broken nervous systems to the long and severe pains of labor. It is truly wonderful how much pain and suffering a woman can, under these conditions, endure without giving way. However, the limit can be, and is occasionally reached. Why not prevent this limit being reached and save the health of the woman? The effect upon the fœtus is *nil.* I have yet to see a child that I considered injured by giving chloroform to the mother, and such I believe to be the opinion of careful observers.

In cases where the pain is not unusually severe I do not use anæsthesia, but when they are severe, be they in whatever stage, I do not hesitate to employ it. Extreme pain produces, in most cases, severe nervous irritation, and this may lead to convulsions. When I find my patient becoming very nervous I relieve it by giving a little chloroform, thereby preventing convulsive attacks, and save the life of the child; for it is well known that convulsions in the mother mostly produce the death of the fœtus. As soon as the nervous irritation is relieved the chloroform is withdrawn.

Rigidity and spasm of the cervix uteri, and rigidity of the perineum can be, in many cases, relieved or modified by pushing the chloroform from obstetrical to surgical anæsthesia. There would be fewer ruptured perinei if the violence of the expulsive pains were modified by giving chloroform and keeping the pains in control. Cazeaux and Tarnier, in their great work, say as follows on the prevention of ruptured perinei: "The administration of ether or chloroform has received the indorsement of the best authorities. They may be given to produce relaxation and dilatation of the rigid perineum, and to increase and restore the natural glairy secretion when the parts are dry, as pointed out by Goodell. They also render the patient insensible to the acute pain which increases the contraction of the perineal muscles."

Should the pains become ineffective, the patient and uterus worn out, then a little chloroform judiciously administered will revive both the patient and uterus, and the use of the forceps will not be required to terminate the delivery. He who has used this agent in obstetrical cases has often been told by the patient that but for it she could not have had her child unaided. How often have I seen these poor worn-out and disheartened women have their drooping spirits revived by a few inhalations of chloroform, and how often have they thanked me for the relief it has given them.

It is not advisable except in urgent cases to push the agent to the extent of surgical anæsthesia, but to use only so much as will secure its analgesic effect. I would not advise its use in all cases. Use it when it is needed. Do not be afraid of it, but always keep in mind it is an agent for good or for

harm. In all obstetrical manœuvers producing severe pain and requiring quietness of the patient, and where it is necessary to produce surgical anæsthesia I would advise the use of ether. There is not the same danger in the use of chloroform in obstetrical practice as in surgical practice. Its toxic effects I have not seen, neither have I read of its having occurred when used to the extent of obstetrical anæsthesia. I have used it great many times and have only good words to say for it. It has given my patients relief from severe suffering, it has elicted thanks from many a sufferer, it has made warm friends for me. Then why not use it?

My method of using it is to put a few drops on a handkerchief twice doubled, place it over the nose and mouth and direct the patient to take a few deep inspirations and encourage her to believe in its power to relieve her suffering. This will attract her attention and when it begins to show its power to assuage pain her confidence is won. As soon as the violence of the pain has passed off the chloroform should be withdrawn. It will not be necessary to give it for every pain, but as often as may seem required. By this method the patient never loses consciousness entirely, but is relieved of her excruciating pain, and the labor passes off with satisfaction to the patient, attendants and doctor. Much more could be written on this important subject.

SUPRAPUBIC CYSTOTOMY.*

BY R. W. STEWART, M. D.,

OF PITTSBURGH, PA.

The following cases operated on by myself during the present year, and given in the order of their occurrence, will serve to show some of the conditions for which this operation is indicated and also serve as a basis for further remarks on the operation.

Case I.—This patient was under the care of Dr. Grube, who has kindly furnished me with the following notes of the case: February 10th, 1891. J. O., aged 32, furnaceman. Patient says that about six months ago he first noticed difficulty in urination, with pain in bladder and penis. This gradually passed into chronic cystitis, accompanied by pain in legs and partial paraplegia. He was treated for cystitis at Mercy Hospital. The bladder is extremely irritable, and holds scarcely an ounce, and as the slightest distension causes intense pain, it is impossible for him to sleep longer than half an hour at a time; consequently he is greatly reduced in strength. The stomach is irritable, and digestion impaired; patient living almost entirely on milk. The prostate gland is slightly enlarged, and is nodular, leading to the suspicion that it is tubercular. Patient has a brother who has pulmonary tuberculosis, and he himself has had a cough for several years, though his lungs are not perceptibly tubercular. Urine contains large quantities of muco-pus. Microscope shows pus cells, caseous flakes and debris. As patient was under Dr. Stewart's care at Mercy Hospital, I have asked him to see patient, and we have decided upon suprapubic cystotomy.

February 14. Dr. Stewart operated as above, assisted by Drs. Ward, Patterson, Emmerling and myself. As the bladder would not bear distension by fluid, the fundus was pushed up into wound by point of sound. A papillomatous growth was removed from near the entrance of left ureter—about a teaspoonful of scrapings in all. Wound closed and bladder drained by single large drainage tube; directed daily washing out of bladder with boro-salicylic acid solution.

Feb. 20. Patient has been given great relief from irritability of bladder, and is grateful accordingly. Urine still mucopurulent; general condition, bad.

March 10th. Wound has healed nicely around drainage tube, and patient manages drainage and washing out of his bladder himself.

April 1st. No improvement in character of urine, and patient losing ground steadily. There is occasional discharges of caseous-looking pus from the urethra, which evidently comes from the prostate. Tubercles have made their appearance in the cicatricial tissue about the drainage tube.

The further progress of this case was a gradual decline, until he died about the middle of May.

Case II.—Daniel R., aged 54. About eight years ago he had several attacks apparently of renal colic, occurring at intervals of two months. After this there was a period of quiescence until about eighteen months ago, when he complained of frequency in passing water, the termination of the act being associated with pain, which was referred to the end of the penis. Exertion of

* Read before the Allegheny County Medical Society, August 18th, 1891.

any sort aggravated the trouble, while on the contrary, rest in the recumbent position diminished it. So frequent had become the calls to urinate, and so difficult to restrain the desire, that it was necessary to wear a urinal. For about a year the patient was unable to pursue his vocation of machinist. He was referred to me for treatment by Dr. Ward.

Owing to the extreme sensitiveness of the patient and the irritability of the bladder, an examination without the aid of an anæsthetic was a matter of considerable difficulty, and required the utmost tact and delicacy. A diagnosis of vesical calculus was made, and the patient sent to Mercy Hospital for operation. Accordingly, on March 15th the patient being anæsthetized, a rectal bag was inserted and distended with eight ounces of water. The suprapubic operation was then performed, and three calculi lying side by side were removed. A drainage tube was inserted in the bladder and the wound partially closed with three silver sutures. A loose gauze dressing was applied over all.

The condition of the patient after operation was satisfactory, and was devoid of constitutional disturbance. He left the Hospital on the seventeenth day following the operation. A fistulous opening still communicated with the bladder, which was somewhat slow in healing, but eventually it closed, and at this date patient is in good health, has full control of his urine and is free from pain.

Case III.—Louis M., age 34, a butcher by occupation. On the evening of May 28th, he stepped on a coal-hole, the lid of which turned and he fell, the edge of the lid striking him on the perineum. He was able to walk a short distance, and then took a carriage home. On the following morning he was suffering from retention of urine, and Dr. Speer was called to see him. With a soft catheter he withdrew a quantity of bloody urine. On the evening of the same day I was called in consultation, the doctor being unable to withdraw his urine. At that time the bladder was distended, perineum tender, swollen, and much discolored, the discoloration extending to the scrotum. A diagnosis of rupture of the urethra at the triangular ligament was made, and with the assistance of Drs. Speer, Christler, and McKibben, the patient being anæsthetized, I opened the perineum freely in several places, through which a small quantity of bloody urine escaped. A complete rupture of the urethra was discovered. Owing to the extravasation, the tissues were so altered in appearance that it was impossible to distinguish the vesical end of the torn urethra, and after a patient attempt I abandoned the search for it, and ordered his removal to Mercy Hospital. He did not enter the Hospital on the following day, and as he was still suffering from retention it was necessary to asperate his bladder in the morning and evening. On the following morning he entered the Hospital, and I operated on him again. At this time the patient's temperature was 103° F., and his general condition was bad. Being again unable to find the vesical end of the urethra, I opened the distended bladder above the pubes, the incision in the bladder being just sufficient to admit a steel sound, with which I performed retrograde catheterism. The sound, after passing from within outwards through the prostatic urethra, was made to project through the perineal opening. While in this situation a stout rubber tube was fittted on the projecting conical extremity of the sound, which together with the tube was withdrawn into the bladder, and the sound disengaged from the tube. The sound was then passed from before backwards through the pendulous urethra, the extremity again presenting through the perineal opening. On this was fitted the end of the rubber tube which projected from the perineal opening, and the sound carrying with it the tube was withdrawn. By this manœuvre a tube was inserted in the whole length of the urethra, one end being in the bladder and the other projecting from the external meatus, the central portion bridging over the torn ends of the urethra, which were separated by an interval of about three-quarters of an inch. Displacement of the tube was prevented by pinning it to the prepuce. The patient's condition improved at once; his temperature was normal on the third day. The urine drained through the tube. A slight leakage escaped through the suprapubic opening. On the eighth day the tube was removed, and the patient left the Hospital on the twelfth day, since which time no urine has passed by suprapubic opening. A No. 26 French sound has been passed at intervals since that date. At present the sound is passed once every two weeks to prevent the formation of a stricture at site of injury, and except for this inconvenience the patient is as well as he ever was.

Case IV.—A. M. W., age 21. Ten years ago this patient was suddenly attacked with a desire to urinate frequently, which he attributed to holding his urine too long. This condition has persisted without intermission during the past ten years, passing water

every twenty to forty minutes, night and day, the act being associated with violent tenesmus, and, at times, excruciating pain. The constant straining has produced a marked prolapse of the rectum, which protrudes during the act to the extent of about five inches.

Three years after the onset of this attack he became subject to epileptic seizures which would occur about once a month, and in some manner seemed to be associated with an exacerbation of his vesical trouble. I may anticipate by saying that since the latter has been relieved the convulsions have ceased.

During the ten years he has suffered he has tried various forms of treatment in the hospitals, and out of them, under regulars and irregulars, besides his attempts at self-cure with the aid of patent medicines, all of which, to use his own language, did him no good, and he was waiting to die. Finally Dr. Buchanan sent him to Mercy Hospital, and he was transferred to me. The case was and still is something of a puzzle. The sound failed to shed any light on the subject. The cystoscope was also used, but nothing abnormal could be detected; external perineal urethrotomy was performed, and a digital examination of the interior of the bladder was made by Dr. Buchanan and myself, but nothing abnormal, further than a dilatation of the opening of the right ureter could be detected. Into this opening I readily inserted the beak of Thompson's searcher which passed, without obstruction, along the ureter until it must have reached the pelvis of the kidney. In this situation the searcher could be readily turned in any direction, showing that the ureter was much dilated. While the searcher was in this situation the descent of the liver in inspiration could be readily felt pressing against the extremity of the instrument. The ureter contained about an ounce of apparently healthy urine, which escaped along the hollow instrument. A drainage tube was inserted in the perineal opening, and the bladder drained by this means for ten days. During this period the patient had comparative comfort, and for the first time in ten years he was able to sleep a few hours at a time. After the tube was withdrawn on the tenth day, the perineal opening closed, and the patient relapsed into his previous miserable condition.

The results of all these examinations showed that we were no nearer the solution of the cause of this trouble. Whether the dilated ureter was the cause, or the result of the frequent urination, we are unable to determine; one thing, however, was apparent, that drainage of the bladder relieved the symptoms, and I therefore decided to establish permanent drainage.

In this operation I was again assisted by Dr. Buchanan. A specially contrived sound, having a greater curve than the ordinary sound, and a tip on it over which a tube could be readily fitted, was used. The extremity of the instrument could be felt just above the pubes. An incision was made over it, and the instrument presented itself in the wound. A tube was inserted over the tip of the instrument, which was withdrawn, leaving the tube in the bladder, and a permanent drainage was now established. The patient, in a short time, was able to manage the tube himself, taking it out twice daily, and washing the bladder with a weak bi-chloride solution, the free extremity of the tube fitting into a urinal by day, and at night connected with a long tube which carries the urine to a vessel placed at the bedside. When last seen he had gained in flesh, could sleep without interruption, and for the first time in his life he was making arrangements to earn a living for himself.

The operation of suprapubic cystotomy has, within the past few years, attracted considerable attention, and is now looked on with more favor than at any previous period. Some have gone so far as to condemn entirely the perineal route to the bladder, and assert that the suprapubic route should be used exclusively; but that this is going too far will be evident to any one who will give the subject a little attention. For temporary drainage and for digital exploration, the perineal method of opening the bladder is undoubtedly the simplest and the safest. On the other hand, the suprapubic method is, in the majority of cases, to be preferred for the removal of calculi too large to be crushed; also for the removal of tumors, with the possible exception of prostatic growths, and for the establishment of permanent drainage. This operation has been hedged around with so many precautions and imaginary dangers that what is really a very simple operation appears to the uninitiated to be one of great magnitude.

Elaborate dissections have been made to show the relationship of the vesico-parietal peritoneal reflection to the operation, and the benefits of rectal and vesical distension has been urged. The dangers of urinary extravasation and hæmorrhage have been pointed out, and the advantages of Trendelenberg's position dilated upon. Regard-

ing the much-talked-of peritoneum: In none of the cases that I have recorded was it seen during the operation, and in only one of them was a rectal bag used. While vesical distension was resorted to in none, though present as an accidental occurrence in Case III, the advantages of both of these have, in my opinion, been more than counterbalanced by the risks incurred from over-distension in their use. A longitudinal incision was used, keeping close to the upper border of the symphysis pubis, and the bladder opened on the tip of a well-curved sound, the finger being kept at the same time in the upper border of the wound to prevent displacement downwards of the peritoneum and intestines. A pair of forceps was next insinuated alongside the sound, into the bladder, and expanded so as to tear the vesical opening to the extent desired. Hæmorrhage was not troublesome in any case. No attempt was made to suture the vesical wound, nor would I recommend that it be attempted, unless the opening was very large. In three of the cases the abdominal wound was partially closed with silver sutures; but in each of these cases the wound reopened on removal of the sutures, so that in the future I will dispense with their use. I would recommend, however, that the incision, both in the abdominal wall and bladder, be limited to the smallest extent consistent with the requirements for operating within the bladder.

No constitutional disturbance was produced by the operation in any case, no extravasation of urine occurred, and the after-treatment consisted of frequent renewal of the dressings and washing out of the bladder with a mild antiseptic solution.

(For discussion see Society Reports.)

Society Reports.

ALLEGHENY COUNTY MEDICAL SOCIETY.

SCIENTIFIC MEETING, AUGUST 18TH, 1891.

T. D. DAVIS, M. D., PRESIDENT IN THE CHAIR.

A paper on SUPRAPUBIC CYSTOTOMY was read by Dr. W. R. Stewart. (See page 732.)

DR. BUCHANAN: I am very well acquainted with the history of the fourth case reported by Dr. Stewart, and I think the doctor deserves the greatest credit for the way in which he followed up the treatment. The case was a very mysterious one, and yet remains so. There was no obstruction of the urethra. There was no active cystitis. There was no disease in the kidney, or in the pelvis of the kidney, as far as could be discovered. There was nothing to give rise to the dilatation of the ureter, the enlarged outlet of which could be felt very plainly with the finger through the perineal incision and demonstrated with the sound, except the constant contraction of the bladder. The opening of the bladder for permanent drainage above the pubis was an entirely arbitrary matter, not based on anything except the fact that during the time at which the bladder was open below, the patient was relieved from pain. For this reason I think Dr. Stewart deserves the more credit for following up that hint and doing this operation without any other indication; an operation which has certainly proved very successful. The man was in a wretched condition; the contractions of the bladder were so painful as to make him cry out; he could not stand still when passing his water, and there was very extensive protrusion of the rectum.

DR. MACFARLANE: I have nothing to say except to compliment the doctor upon the manner of presenting his cases. There is one feature about the one case in which I cannot help but admire the manner in which he treated it. The case is the one in which he had rupture of the urethra. Now anybody who has ever attempted to do anything with rupture of the urethra, knows the difficulty connected with it. I have on two occasions seen men of ample experience spend two hours or more before being able to unite the urethra; on another occasion an hour and a half was spent with lack of success, the work being left to be completed at a later time, the man being, in the interval, in a precarious condition. Now, the doctor's method of treating that, I think, deserves widespread circulation, for it certainly acted very well indeed, and affords a very happy escape from the great difficulty connected with a case of rupture of the urethra.

DR. MCKENNAN: I have a specimen which may be of interest to the members of the society. It was sent to me by Dr. Ray Grayson, of Washington, Pa. It is a congenital malformation of the rectum. The rectum ends at the base of the bladder. It is interesting on account of the fact that we very seldom get a *post-mortem* in cases of this kind, and it represents a type of cases not at all uncommon. An examination of the rectum here discloses the fact that there is a peritoneum connecting the rectum with the

bladder. The rectum enters directly at the base. Some times the rectum enters the bladder at the vertex. After an examination is made, it will be seen that the peritoneum surrounds the entire lower part of the rectum running from the bladder directly to the rectum and surrounding it. This case represents one of a type of these cases of congenital malformation of the rectum which vary from occlusion of the anus to complete absence of the lower bowel. It is said that congenital malformations of the rectum and anus occur about once in every 5,000 deliveries, although some observers state that in statistics of 66,000 cases of delivery, congenital malformation of the rectum and anus occurred only three times. Other observers, however, state that congenital malformations do occur as often as one in every 5,000. To my knowledge, quite a number of cases have occurred around here. It is obvious from the malformation here that operative procedures were hazardous. An attempt in this case was made to reach the rectum but failed. The diagnosis was properly made of entrance of the rectum into the bladder by the appearance of the fæces in the urine. The operation, I believe, was made on the patient on the 17th day, and the patient lived until the 26th day.

Dr. Stevenson: I have seen three cases of imperforate anus: in one of the cases the rectum terminated in the bladder. In that case there was an attempt made to reach the rectum, but it failed and the child died. In two other cases I have seen, the rectum was reached, and the method pursued was passing up a hypodermic needle and withdrawing the fæces and cutting up alongside of the needle, and the rectum was reached and drawn down and the opening stitched. These children both recovered, and had no trouble with their bowels.

Dr. Stewart: It seems to me that in this case a suprapubic cystotomy would have been proper, and would have given relief.

Dr. Buchanan: I think a very much better way would have been to opened the sigmoid flexure of the colon; that can always be reached. It would be very much better to drain the fæces out by an abdominal fistula than through the bladder.

Dr. McKennan: I find that operations in cases of this kind have never been successful. Operations have been done, some operators opening the perinenm, cutting into the bladder and thence making a cut clear through the opening of the rectum into the bladder, making thus a large wound into the perineum. But this method of procedure either produces peritonitis or it causes a fistulous opening in the perineum, which greatly contracts. The only operation which can be done with safety is that suggested by Dr. Buchanan, and that is the operation of colotomy. I find that in malformations of the anus and rectum, that in which the rectum enters the bladder occurs in about forty per cent. of all malformations.

GENERAL DISCUSSION ON SURGICAL JOINTS.

Dr. Murdoch: I am not exactly clear as to what is meant by surgical joints. I suppose it may be joints liable to disease or injury, or that might come under the care of the surgeon, but in that case it would properly include every joint in the body, for there is no joint that might not require surgical treatment; therefore, I do not like the term wholly. I suppose, however, reference is intended to be made to those joints which more frequently come under the care of the surgeon, either for disease or injury, and as that would be so much as to include the whole subject of tuberculosis and all kinds of injuries to the joints, I am not able or willing, and if I were there would not be sufficient time, to discuss the subject as a whole. It might be said, however, that there have been great changes in the surgical treatment of joints within a comparatively few years, as you are all well aware. This has arisen in a great measure from the fact that because of the great improvements in surgery since the introduction of antiseptic treatment of wounds the joint can be invaded and dealt with with so much less risk than formerly. That is one reason. And it seems to be a sufficient reason in the minds of a great many surgeons, that simply because joints can be got into and incised or scraped out, that is a good reason for doing it, and of course this must enter into the problem of whether such an operation should be done. Another reason why the joints are more frequently treated surgically now than formerly is owing to the changed views with regard to the chief disease which attacks the joint, namely, tuberculosis. Without entering into a discussion of the pathology of that disease, we are all, I believe, convinced that the former ideas with regard to it were not correct. I think we all believe now that it is an infectious disease and is not always inherited from the parent. We believe the trouble is usually of local origin, and there is a local focus from which the disease starts, and it is in that view, I think, that a great many operations are now done by surgeons who would have formerly looked with doubt upon the idea

that the local focus of the tubercle can be taken away before it has found localities in other parts of the body. In my recent visit to Europe, both in Ireland and Scotland I saw surgeons there opening into the joints in cases where I am sure nobody here in the United States would think of operating upon, nor do I believe they would be permitted to operate. I saw the joints of young people opened where there were none of the aggravated signs which we look for here, with a view of excising this local focus, which it was believed existed either in the bone or in the joint. I saw, for instance, a surgeon, Dr. McEwen, of Glasgow, operate on a child about fourteen years old, able to walk without much limping, but afflicted with what we call the first stage of hip-joint disease. I saw him cut into the joint and remove the head of the femur. In Ireland I saw a surgeon operating by what they call there an anterior procedure. In these operations they did it in the first stage of disease, before the disease had extended and made much or any destruction of the joints, but they do this operation on an entirely different principle from what I have been in the habit of seeing. They do it with the least possible violence to the joint; the head of the bone is not thrown out of its position. In both of these operations, Dr. McEwen did his operation posteriorly, making the usual incision from the crest of the ilium down from the joint, a short incision, and then introduced his chisel through an opening not over an inch and a half long, and by its manipulation, much pressure and lateral motion, he was able in a very short time to cut off the head of the bone, and then introduce his finger, and extract the head. As I said before, I not believe this would be permitted in our country. We see so little of joint diseases here, tubercular diseases, compared with what I saw in Ireland and Scotland. This is accounted for by the fact that the patients are not so well fed there. Among the poor in Scotland, the number of young people with joint diseases is remarkable. Now, as I said before, I do not expect to be able to treat all of this subject, and I must say that I have had very little experience in the treatment of any of the joints, excepting that of the knee. I have had some experience in that, and have excised the knee some eight times, I think, and with seven successful cases. My friend, Dr. King, at the West Penn Hospital, has perhaps excised more, and has lost but one patient. I wish to speak of the difference between present practice and that in vogue when I was a young surgeon. I know of no subject which shows the great improvements that has been made in surgery more than this one of the manner in which the joints can be opened. During our late war, for gunshot injuries of the knee-joint there was fifty-seven operations performed, and of these fifty-seven, forty-four patients died. Mr. Otis, in his report of our late war, states that previous to the war there were some eighteen excisions of the knee-joint, of which sixteen were fatal. Now, the operation of excision of the knee-joint is one that is almost universally successful, that is, the patient seldom dies under the operation, and it usually results in a useful limb. In Ireland, where they do this operation a great many times, with great success, I was shown at the Richmond Hospital some twelve cases that Dr. Thompson had in the Hospital under recovery. He told me that he had done the operation forty times, with only one death, so that no doubt the operation is one recognized as proper, when formerly amputation would have been in all these cases considered the proper course. When I look back upon my practice, even as late as when I became surgeon of the West Penn Hospital, within twenty years, I can remember patients who lay there for a year or two years with white swelling, as we called it, and eventually perished. I have seen some of these cases amputated, and I have seen several of them succumb simply from the confinement and the inability of the doctors to do them any good. Now these cases would not be permitted to stay there two weeks before some surgical operation would be performed for their relief. As you know, a local focus exists in tuberculous disease; it may be necessary to incise the joint, but in other cases, when only the synovial membrane is involved, the operation of arthrotomy may be performed; opening the joint up widely and dissecting out the entire synovial membrane and scooping out with a gouge any local focus that may be found. The disease I no not believe ever commences in the cartilage. I desire, however, to state at this time, and it is probably all that is necessary for me to say to you to show the method that Dr. Thompson uses to the knee-joint, after having opened it, that this is much superior to anything that I have seen, although it is a good deal like the apparatus which I use myself. I have brought it with me and will show it to you. In operating on a knee-joint, we make what is called the horseshoe incision. This is made by commencing well back, and carrying the knife downwards and upwards across to a

corresponding point on the opposite side, the joint opened, and if it is only desired to perform arthrotomy, the whole of the membrane is scraped with a scoop and cut away with the scissors, and then the flap is replased. But if, on the other hand, it is desired to perform excision of the joint, the bones are cut off and fastened together with nails and a splint. The design of those who operate by cutting parallel with the articular surface is to leave the limb at the same relative angle. Dr. Thompson and those surgeons who have had the most experience in operating tell me that is not the proper way to make the section of the femur; he makes the section of the femur at right angles with its axis, so as to make the leg perfectly straight, as it is in the normal leg. I am inclined to believe that is the better way. I will not go into the manner of cutting the bone, as the surgeons all know that as well as I do. The best way of fixing the limb, that is the important part of the operation. I presume part of the success of this operation in recent years has been owing to this fact. Older surgeons had been in the habit of using wire and other appliances, which did not accomplish the purpose very well. I believe the idea of doing anything to keep the parts in apposition originated in Germany, by the use of steel nails driven with a mallet into the bones. I do not think that was as good a means for keeping the bones in place as the one suggested by me. In Ireland they use silver pegs about an inch and a half long, after making a hole with the brad awl. The nails which I use are four and a half inches long for an adult. They are made for me by Mr. Helmold, and according to the pattern of Mr. Wyeth. The nail should be tapered so that it binds as it proceeds. Three nails should be used. Then hold the bone in perfect apposition with the assistance of the external apparatus. The apparatus which Dr. Thompson uses, and which I think is the best way to hold the limb steady, is made from common hoop iron, an inch and a half wide. This is easily manipulated; it is simply wrapped around with a bandage over it to hold it in place, an anterior and posterior splint. The posterior splint is put down around the ankle joint and up on the foot, the anterior one leaving a space for the dressing over the knee-joint, and after the operation it is not disturbed for three weeks, unless the elevation of temperature is over 100° F. There is a drainage tube put in across the joint behind the bone, well down, and usually it is a very successful operation, I could relate some of my cases, but I will not trouble you with that; the time is passing. I will, however, mention a case that I operated upon at the West Penn Hospital, a man forty-seven years old, a miner, suffering with disease of the joint. Although in this case I feared the operation could not be very successful, the man made a remarkable recovery. He walked into the operating room four weeks after the operation with a cane, and left the Hospital in eight weeks. He had been suffering for two or three years. I received a letter from him three months after he left the Hospital. He said: "With the greatest of pleasure I let you know that I am walking without crutch or cane. It was on the 5th of February that I walked. I was very much surprised at myself when I did it. From the day that you operated on my knee until the day that I walked was four months and eighteen days. How is that for an old man? Therefore I thank you most respectfully for your skilful operation on me."

The joints in which operations are the most useful and in which the surgeons now have the most experience and have done the most benefit are the knee, the hip and the elbow. Excision of the elbow for injury is a most successful operation; so is excision of the knee. But I will say, as I said in the beginning, that there are many surgeons who think that because excision of the joint is done with such safety there is a good reason for doing it. It should always be remembered, especially by the young surgeon, that an excised joint is an admission on the part of the surgeon that he is not able to cure it. As our knowledge of tuberculosis advances, and we are able to treat tuberculosis successfully in the lung, we will be able to treat it successfully in the joint, and operative interference will not probably be essential then. It should never be forgotten, as the very first principle in the treatment of all joints, that the first consideration is rest, putting the parts at rest. If joints can be kept still even where there is a local focus of tuberculosis, if they can be kept still, and proper hygienic measures resorted to, many cases will never call for aid from the surgeon. I believe the improvement in the treatment of disease rests in an early diagnosis, and early treatment. Having said this much, with little regard for order, I leave the matter in your hands.

Dr. Davis: The term surgical joints has been used to describe joints that call for surgical interference.

Dr. Stevenson: I have never made claims to being a surgeon, but have been so

situated that I have had to do a little surgical work. I practiced for twelve years in Westmoreland county; I was medical man, surgical man, obstetrical man, and so forth. I had charge at that time of the Penn Gas Coal Company's works, which employed some seven hundred men, and I necessarily saw a good deal of injury. I think the first case I saw after I opened the office was a compound fracture of the ankle-joint, with dislocation of the tibia. After cutting, and having two or three men exert all the strength they could, I could not get the tibia returned into the joint, so I found a meat saw and sliced off about a half inch and got it reduced, and that man is walking about to-day. I saw not long after that a carpenter doing something with a foot adze, the corner of the adze striking him just over the joint, and penetrating the joint. When I saw him the synovial fluid was exuding. This being before the era of antisepsis it ended in an amputation about four inches above the knee-joint. The man got well with the loss of the limb. I have no doubt the improved methods of treatment would have saved that man's leg. I saw another case which was probably a tuberculous joint. It seemed to start without any known cause, and after continuing quite a number of months, the joint suppurated and I found it necessary to amputate above the knee. That man was not so fortunate as the other, his general health gave way and he died, although the stump had healed and done fairly well. One of the first important things is the diagnosis. What have we? Now in joints, we have a great many structures, there is bone, there is cartilage, there is synovial membrane and ligaments and the surroundings. Any or all of these may be involved, or none of them may be. We have what is called simulated disease in joints the same as we have simulated diseases of other organs. We may have a mimicry of disease in a joint, and this may simulate almost anything. It is a very important matter when a surgeon or practitioner is called to a lady, nervous, of inherited tendencies, want of stability, easily excited mentally, and finds that she is complaining of a severe pain in the knee. You look at the joint, you see it is swelled; she says she can not use it, you attempt to use it, she screams out with pain. No doubt it is very important to determine whether it is a hysterical joint.

The constitutional history of the patient may decide this, but if you have an inflammation of the knee-joint, you will have local heat. Possibly, you will have constitutional heat. If you feel this joint and it is cool or clammy, and you take the temperature of the patient, and you find there is no fever, there is strong ground for suspecting that you have no chronic trouble in the knee-joint.

Dr. Batten: In speaking of operations for joint diseases I will not go into a discussion upon surgical treatment. I believe it has been established that these diseases are of a scrofulous nature, and it was believed that that was a fact up to the time that Koch discovered his bacilli. Since that it is believed that the tubercle bacilli caused all these conditions of the joint, and that they are not hereditary. There is a question in my mind whether they are not hereditary. I believe the bacilli can be carried from the mother, a phthisical mother or a scrofulous mother, to the infant. However, that is a question. But there is one case I know in which an operation was not performed. It was a boy about ten years old, whose parents were living. He had what was called white swelling or inflammation of the knee-joint. He was placed under the care of a great many physicians or surgeons, but there were no operations performed, and he finally recovered from this condition, and is at the present time using all the joints and is an active, healthy man. I would say, however, that Dr. Murdoch is deserving of a great deal of credit for the manner in which he performs these operations, and the success that he has had in giving relief to the patients upon whom he operates.

Dr. Kœnig: In surgery, I think we all admit, cleanliness ranks superior to godliness. In view of the recommendation that Dr. Murdoch has made of a certain instrument, it seems to me that we must accord him greater godliness than cleanliness. With his well-known ingenuity he should be able to construct some appliance capable of being made aseptic, after which he would have no occasion to recommend the use of an instrument as crude as the one he has shown us.

Dr. Lange: I will relate one or two cases. A boy about eight years old while playing on the carpet screamed, said he had hurt his knee, and when his mother got it uncovered, she found on the most prominent part of the knee a single drop of blood, which was wiped away and the little fellow moved around the house, but limped. His mother instituted a search for needles and found half a needle with the thread in its eye. The accident did not seem to trouble

the little fellow much until the third day. Although there was no swelling and very little heat, there was a good deal of pain, and when called, I considered it probable a piece of the needle was in the joint or about the joint, and that it would be the proper thing to anæsthetize the boy and attempt to remove it. This was done, a careful search was made for the piece of needle for more than an hour and a half. The joint, however, was not entered. After that, the little fellow was put to bed and his limb on a straight wooden splint; he was kept in that way two weeks and then allowed to get up. He was up about a week and was again seized with pain and this time a distinct fullness of the joint. The four depressions at the four corners of the patella had disappeared and were replaced by four convexities which fluctuated.

The leg was put in plaster and all motion of the knee-joint was prohibited by the plaster for three months. Then the plaster was taken off and the boy beginning to be active, there was again a slight swelling of the joint, and the plaster was reapplied and kept on for a couple of months more, and then taken off; and finally we saw the end of that surgical joint. The needle has, in all likelihood, become encysted, and will likely do no more harm. The other case was that of a boy riding his velocipede and falling with it. He was picked up and carried home, and when his doctor saw him he concluded he had a dislocation of the femur, because the leg was fully an inch and a half or two inches longer than the other, and because it was rigid, immovable and painful. The doctor chloroformed him, and attempted to reduce the dislocation, and thought he had succeeded. He applied a bandage to the boy's thigh and pelvis, and put him to bed, and the boy complained very little for two or three days. After this the doctor took off his bandages, examined the limb, and found it was fully two inches longer than the other. It was then I saw the boy, and examined him under chloroform as the doctor had done. The curious part of the case was that when the boy was anæsthetized his limb was the same length as the other, and it was evidently not dislocated; but when the boy came from under the influence of the anæsthetic, the limb lengthened two inches. The parents sent for additional counsel, and the last medical gentleman called in concluded that the boy had hip-joint disease. We could not make a diagnosis, allowed that to go, and put the boy to bed.

He was kept there two or three days, then got up and walked, and had no pain nor deformity. On a later occasion when I saw him he complained of pain, and again his leg was apparently two inches longer. We examined him very carefully, and we found that this was a simulated disease, that, as my friend, Dr. Stevenson, has characterized it, it was an hysterical joint, and that the lengthening was not between the pelvis and the femur, but was produced by muscular tilting of the pelvis. The length from both anterior superior spinous processes, to corresponding points below, was always the same, even when the leg projected two inches beyond its fellow. On the other hand, a line from one anterior superior spinous process to the other is not at right angles with the body, but two inches lower on the side where the leg seems longer. This boy is now actively about, painless and straight; but when he is cross, wilful, or disappointed, he complains of his hip, tilts his pelvis, and lengthens his leg.

Dr. Green: Dr. Lange's case reminds me of a surgical joint with which I have had some trouble. The patient, whom I have been called to see many times, has the power of dislocating the lower jaw. She is a girl of nine years; she has always been notorious for will power. Her mother told me that from childhood, whatever she asked for had to be given her. She would say: "If you don't give it to me I'll stretch," and immediately, were the request not granted, the child would begin to "stretch," and open her mouth just as wide as she possibly could, until her jaw would slip out. About two months ago I replaced the jaw; whether she has done much stretching since that time I do not know. I have known some persons who frequently had dislocations of the lower jaw, but in no other case have I seen a person who could wilfully, maliciously, bring about this condition of affairs by stretching, and this boy of whom Dr. Lange has spoken reminded me of the spoiled child who "stretches."

Dr. Buchanan: I understand the subject of the evening to be surgical joints, and those, I presume, are joints which are subjects for surgical treatment, either from disease or accidental injury. Vast improvements have been made in the treatments of injured joints within the last ten or fifteen years. It is within my recollection when a simple puncture of the ankle-joint, and an injury requiring amputation of the anterior part of the foot, would have determined a Syme's operation, or an amputation of the

leg. So great stress was laid upon the fact that *a joint had been opened,* and I believe this to be true with very many medical men to-day, that when called to such a case, the question of amputation rises strongly in their minds. It is well known to-day by surgeons that the synovial membranes can be treated in very much the same way, and with the same impunity as the tendinous sheaths, or any other of the soft tissues of the body. The thing of importance is, when these cavities are open, to keep them aseptic. If this is done no harm can result from the opening, and in the case of the joints we have exactly the same means of keeping them aseptic as in case of the peritoneal cavity, and we can, in addition, if desired, use antiseptic solutions. Now, we are constantly called to dress injuries of joints, particularly fractures of the bones which go to form the joints; and I am satisfied that the practice will be in the future, in many cases, to open joints, wash them out, repair the soft parts, and wire the fragments of bone where the joint has been subcutaneously opened, and where the bones cannot be kept in apposition without great trouble, painfully pressing splints and firm bandaging. I am reminded of a case which Dr. Murdoch saw with me in consultation about a year ago. The patient had a simple fracture of the fibula and a fracture of the inner malleolus. I was called to the case and reduced the fracture without great difficulty, and was able to place the broken malleolus exactly in its position, and retain it there with a simple splint. Dr. Murdoch was called in consultation at the request of the patient, and, to my satisfaction, the next day, we endeavored to replace this dressing by another more permanent in character. This set up a frightful spasm of the muscles of the fibular side of the limb, and the spasms were so great that, using all our force, we had not the power to overcome them and place the limb in shape. I never saw a patient suffer more than did this patient for a few minutes. These shap-edged fragments threatened to break through the skin and form a compound fracture. I proposed at the time, although the patient refused to listen to any suggestion of the kind, to make an incision over the point of the fracture, and put in a single silver wire to retain the inner malleolus in position, and the pressure of an ounce or two ounces on that silver wire would perfectly keep the bone in position. Having to start with a simple fracture, having made the wound ourselves, we could keep it aseptic, no harm could come to the joint. I believe the time will come when that will be the ordinary treatment for such fractures in the neighborhood of joints, where the disposition to displacement is very great, where a very slight force exerted through a silver wire will hold the parts perfectly in apposition, and where we have every possible chance to keep the wound aseptic. There is another aspect of surgical joints not dealt with very often, and that is the advisability, where there is doubt, of making an exploratory opening. I see no reason in the world why exploratory openings should not be made into joints when we suspect disease, as well as into the peritoneal cavity, and as often; but such openings are, I believe, very rare. With regard to case reported this evening, of compound fracture of the inner malleolus and fibula, in which there was protrusion of the shaft of the tibia, in which the patient was etherized, and section of the tendo Achillis made, and a piece cut from the end of the tibia to facilitate reduction, I would say that I reported to this society a year ago a case exactly similar in all respects. I did not find it necessary to do a tenotomy, and the bone was returned without sawing any of it off, and I can hardly imagine a case of this nature in which the same result could not be secured, providing the opening in the soft parts is sufficiently large to let the bones slip in. Muscular action is the only thing that would prevent the return of such a bone, and it can be completely abolished by anæsthetics.

Dr. Davis: All cases of joint diseases presents certain characteristics peculiar to themselves, and require good judgment on the part of the surgeon at the time, and can scarcely be discussed in a general way, but there are joints that are difficult of diagnosis, that no doubt give rise to a great deal of distress to the patient and give rise also to a good deal of distress to the attending physician, because of the long continued suffering involved. The youngest practitioner is likely to come in contact with such joints. One of the very important questions in such joints is when a surgical operation is advisable, or whether it is advisable at all. Take, for instance, the tuberculous joints referred to. The question comes up, when to operate upon it. Will the opening of these joints remove the diseased tissue? Will it give the patient a better chance of life? It is but a few years since all cases of hip-joint disease were considered the property of the surgeon. We have heard to-night of this being carried to extremes on the other side of the water, and operations done which

would not be allowed here, and yet in looking at the statistics this operation on the hip-joint has not been satisfactory.

In the first place, quite a large percentage of those operated upon have died; perhaps not directly following the operation, but within a few days or a few weeks after it. And of those who have recovered from the direct result of the operations, over one-half have died where the diseases have been of tuberculous origin, in such a short time that it is questionable whether the operation does not hurry the general disease. I have read somewhere that out of 388 cases of hip-joint disease operated on, only 61 presented results that could be called satisfactory. Of these 61 there were about 40 that had motion in the joint. Of the 40 there were about 10 who did not have to use the artificial means, such as crutches or cane in walking. Results such as these are not flattering for the operation, and do not lead us to hurry or advise our patient to go into the hands of the surgeon and submit to the operation so liable not to be favorable in its outcome. And then in regard to operations on the knee. While we know that under aseptics it has improved wonderfully as regards immediate death, yet the cases especially where it is tuberculous have not done as well as we could wish. And so of the ankle-joint. I have in mind now a tuberculous ankle-joint where operations have been advised over and over again. I do not know but that if this young man would submit to the operation, and have all this bone removed, the confinement in the house would hasten his end. It is difficult for me to know whether to advise an operation or not. The difficulty with the general practitioner is to know whether to turn such cases over to the surgeon, and with the surgeon to know whether operation ought to be resorted to.

Dr. Murdoch: I think the surgeons who are in advance in this matter of treatment of joints are tending toward diminution of operation at the late stage, where there is great injury to bone. Patients in that condition do not recover well from an incision of a joint, and I believe the tendency of the better surgeons now-a-days, would be to recommend radical measures in joints such as Dr. Davis has described. If the bones are extensively diseased, and the joint extensively involved, the patient would be likely with an excision, to perish from general giving way of the system. I fully believe that such surgeons as McEwen, of Glasgow, and Barker, of London, and the surgeons most in advance, operate early, when the disease is local, and before it has yet attacked the synovial membrane, then is the time to operate at the earliest stage, when it is possible to remove the disease, and it can be removed through a smaller incision without disturbing the relations of the joints, and a movable articulation may then be possible. In Ireland and Scotland, where there are hundreds of these cases to one here, the people have been educated up to the necessity of not allowing this disease to go on, and are willing to submit to an early operation. I am very sure the people here will not submit to the early operation thought proper there. I believe that it will yet come to be the proper practice where a diagnosis can be made sufficiently early. I will say to Dr. Koenig that if he will come up some time to my operations, I will show him how to do the operation, and how I have been so successful in preventing infection of the wound with the washouts I use.

Selected Formulæ.

ICHTHYOL IN THE TREATMENT OF DYSPEPSIA.

Stocquart is quoted by the *Revue Internationale de Bibliographic* as having recorded seven clinical observations regarding the use of ichthyol, for the purpose of relieving vertigo and other cerebral disturbances arising from simple dyspepsia or indigestion in the gastro-intestinal canal. He found that when ichthyol was administered with the bromide of potash, the latter drug was very well borne by the stomach, and that the appetite was improved simultaneously with the increase of digestive power.

SUPERIOR LIQUID GLUE.

℞

Gelatin	ʒijss.
Glue, Russian	ʒijss.
Acetic acid, glacial	ʒij.
Alcohol	ʒijss.
Acetic acid, 20 p. c.	ʒij.
Alum	gr. ij.

Put the gelatin, glue and acetic acid over a water bath until liquid, then add the alum and alcohol. When thoroughly mixed, fill into appropriate bottles.—*B. & C. Drug.*

CREOLIN IN ERYSIPELAS AND ECZEMA.

"Dr. Rothe has used in the treatment of erysipelas a creolin ointment containing—

℞

Creolin	1½ parts.
Creta præp., axung. porc., aa	15 "
Ol. menth. pip.	gtt. 5.

This is spread in the thickness of the

blade of a knife over the diseased parts twice or three times a day, a thin layer of cotton-wool being applied as a covering. In from twelve to twenty-four hours improvement was always apparent, and the disease was cured in three or four days. The same ointment also did good service in a case of weeping eczema of the face, as also in several cases of eczema in children. A patient suffering from scabies was treated with a thorough washing with soft soap and inunction of this ointment, with such a decided effect that Dr. Rothe considers creolin to be undoubtedly a specific for the disease."
—*British and Colonial Druggist.*

FOR GONORRHŒA.

The following antiseptic injection is employed by Brindisi:

℞ Antipyrin.....gr. xlv.
Sulphate of zinc.....gr. iv.
Rose water.
Cherry-laurel water, aa.....f℥ij.
M.

—*Rev. Gen. de Clin. et de Therap.*

TREATMENT OF SYPHILIS DURING GESTATION.

Besnier insists upon a tonic and an energetic specific treatment for the above condition. Good alimentation, syrup of the iodide of iron, and preparations of cinchona bark, with the daily administration of the following pill:

℞ Bichloride of mercury.....gramme 0.01.
Thebaic extract.....grammes 0.005.
Gentian extract.....grammes 0.005.
Glycerine.....s. c.

—*Journ. de Médecine de Paris,* Sept. 13, 1891.

FOR PARASITIC DERMATOSIS.

The following ointment is recommended by the *Journal de Médezine de Paris,* for the treatment of parastic dermatosis:

℞ Acid salicylic.....grammes 5.
Creosoti..... " 2.
Saponis..... " 100.
M. et Signa. To be applied to the affected parts.

FOR CHRONIC DIARRHŒA AND DYSENTERY.

Maget advises the following combination for the treatment of the above affections:

℞ Calomel.....grammes 0.60.
Pulv. Ipecac..... " 0.40.
Ext. opii..... " 0.05.
M. et ft. Pilula vi. Sig. One pill every two hours.

—*Rev. de Therap. med. Chirurg.,* Sept. 15, 1891.

TREATMENT OF CYSTITIS.

Wyman and de Laval recommend the following formula in cases of cystitis, whether acute or chronic:

℞ Ext. pichi fl.....grammes xxxij.
Potassii nitratis..... " iv.
Syr. simplicis..... " xc.
M. Sig. A teaspoonful every three hours.

M. de Laval states that this mixture gives the best results in all varieties of cystitis, whatever the origin may be (senile, gouty, from calculus, traumatic, gonorrhœal, etc.), and finds it useful also in hæmaturia. It is, however, contra-indicated in cases of Bright's disease, in which malady pichi seems to increase the albuminuria.

Pichi (*Fabiana imbricata*) is a plant from Chili, and was brought to the notice of the profession by M. L. Boyer, in France, in 1886, for the treatment of cystitis and urinary affections. M. de. Laval advises the use of a fluid extract made from the young twigs of the plant, and not, as used by the natives, an infusion of the woody portions, which is much less active.—*La Semaine Médicale.*

ANTIPYRINE IN DERMATOSES OF CHILDREN.

In the treatment of pruriginous dermatoses of children, Blaschko employs the following:

℞ Antipyrine.....grammes v.
Simple syrup..... " xxv.
M. Sig. A tablespoonful for a dose.

—*Le Bulletin Médical,* Sept. 9, 1891.

ARISTOL FOR PULMONARY TUBERCULOSIS.

Nadaud has proposed, before the Academy of Medicine, Paris, the following for the treatment of tuberculosis, in the form of hypodermatic injections:

℞ Oil of sweet almonds.....grammes c.
Aristol..... grammes 0.01.
M. Sig. One cubic centimeter of this liquid to be injected at a time.

—*Le Bulletin Médical,* Sept. 16, 1891.

FOR HERPES GENITALIS.

After washing the parts with a weak solution of carbolized water, E. Besnier, (*L'Union Médicale*) recommends this mixture to be locally applied:

℞ Powdered tannic acid.....grammes v.
Subnitrate of bismuth.....gramme j.
Powdered starch.....grammes c.

—*Jour. de. Méd. de Paris,* Sept. 27, 1891.

PASTE FOR ACNE.

Kaposi (*L'Union Médicale*) employs the following paste in the treatment of acne. The part affected being well washed with soap, the paste is to be applied during the night, and in the morning must be replaced either by glycerine or by the common ointment of zinc:

℞
Washed precipitated sulphur..
Pure glycerine.....
Carbonate of potassium..... } grammes x, each.
Hydrolate of cherry bark.....
Alcohol.....

Jour. de Méd. de Paris, Sept. 27, 1891.—

FOR ACNE.

Payne (*Intern. ph. G.—Anz. Pharm. Post*, 1891, No. 5, p. 95) in the treatment of this disease, uses the following mixture to be applied, after washing of the parts:

℞
Sulphur.....gramme j.
Camphorated alcohol.....grammes v.
Lime water..... " lxxx.

Or this ointment:

℞
Sulphur.....gramme j.
Lard..... .....grammes xxx.
Phenic acid.....gtt. x.
Carbonate of potassium.....gramme j.

At the same time the author advises the use of purgatives.—*Jour. de Méd. de Paris*, Sept. 27, 1891.

NAPHTHALINE AS A VERMIFUGE.

According to Dr. Mirovitch (*Mecredi Médical*) naphthaline is an admirable remedy, not only for ascarides, but for tapeworm. He considers it much more certain and far less poisonous than most of the other vermifuges. For adults he prescribes a fifteen-grain powder, to be followed immediately by two ounces of castor oil. For children the following:

℞
Napthaline .....gr. jvss to vij.
Castor oil.....f℥ ss.
Essence of bergamot.....gtt. ij.

For two days before the dose the patient is directed to live on salt, acid and highly seasoned food, then the naphthaline is given fasting early the following morning.

PROLAPSUS UTERI.

℞
Tinct. cimicifugæ.....f℥ j.
Aletris cordial (rio)..... ..f℥ vij.
M. Sig. Teaspoonful four times a day.

This often cures without the aid of mechanical support.

INFANTILE CONVULSIONS,

℞
Chloral hydratis.....gr. iv.
Potassii bromidi.....gr. viij.
Aquæ.
Syrupi, aa..... .....f℥ j.
M. Sig. One dose for a child æt. two.

—*Jacobi.*

THE ADMINISTRATION OF MERCURY TO SYPHILITIC INFANTS.

Dr. Simon (*Journal des Maladies Cutanées et Syph.*) says that for an infant of five or six weeks the liquor of Van Swieten is considered preferable to other preparations, in the dose of fifteen to twenty drops per day, taken in three or four divided doses. Mercurial frictions can be applied at the same time in the arm pits.

The following formula is given:

℞
Neapolitan ointment.....grammes ij.
Lanolin..... " vj.
Mix and divide into six doses.

Each dose being wrapped separately in paraffin paper, according to Widerhofer's plan. Each day one is used for a friction in the axilla, and after from two to four days a tepid bath is given.

Widerhofer also employs the following ointment upon the sides of the nose:

℞
Red precipitate.....centigrammes 0.01.
Lanolin ..... grammes x.

This is to be applied by mild frictions in quantity equal to that of a pea. This mode of application has the advantages of diminishing the swelling of the mucous membrane of the nose, when it exists, thus permitting the infant to take the breast more readily.

Corrosive sublimate baths are useful, especially in rebellious cases which do not give way to the means above referred to. They must be repeated every three days, and, during the immersion care must be taken to prevent the infants from swallowing any of the toxic fluid.

The following is the formula for each bath:

℞
Corrosive sublimate.....grammes 0.20.
Hydrochlorate of ammonia.gramme j.
Distilled water.....grammes cxx.

If the infant is over six months of age, and is raised on the bottle, the milk can have Gilbert's syrup added to it, a third of a teaspoonful in divided doses during the twenty-four hours. The author administers a potion of which each teaspoonful contains one centigramme of mercurial salt and half a centigramme of the iodide of potassium or sodium.

The following formula can be advantageously employed:

℞
Biniodide of mercury.....grammes 0.10.
Iodide of sodium.
Distilled water, aa.....gramme j.
Syrup.....grammes x.

This is to be given according to the age of the infant, a dose of half a teaspoonful for an infant of one year, a teaspoonful for a child of two to three years, two teaspoonfuls for a child of from three to five years, and three teaspoonfuls for a child of five to eight years.

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The Editor will be pleased to get medical news, but it is important that brevity and actual interest shall characterize communications intended for publication.

LEADING ARTICLE.

THE VALUE OF PSYCHICAL THERAPEUTICS.

In a paper entitled "Psychical Therapeutics," Dr. William B. Sprague, the retiring president of the Detroit Academy of Medicine, has called attention to the value of mental impressions in the treatment of disease. While Dr. Sprague has only repeated what every physician of any experience knows to be true, still, his words are a timely reminder that in the hurry of a busy practice, or in the faithful performance of all the most modern means to arrive at scientific accuracy in diagnosis, we should not forget to use our personal influence for the good of the patient.

It would seem that we are only beginning to appreciate how powerfully mental states affect bodily processes. Dr. G. Bassi has demonstrated fully that in animals dying of grief are commonly found hyperæmia, capillary hæmorrhage and parenchymatous degeneration of the internal organs. Schule and others have found parenchymatous degeneration in persons dying of acute delirium. The theory held by Bassi is, that the nervous disturbance affects the nutritive processes in such a manner as to cause the formation of poisonous ptomaines, which are mainly responsible for the fatty degeneration found in the internal organs; just as certain substances, (such as phosphorus,) affect the tissues.

The mental medicines which Dr. Sprague refers to in his paper, are not the so-called "Christian Science" or "Faith Cure," or even hypnotism, but simply those which every physician can freely employ with greater or less effect, viz.: a cheerful face, kindly sympathy, and the adapting of one's self to the needs of each patient's mentality. Those doctors who have become famous for their skill in dealing with nervous diseases could, probably better than any other class of physicians, tell of the value of rightly directing the current of the patient's thoughts; and, we doubt not, largely owe their success to a *fine sympathetic mental constitution*, which

enables them to understand each patient's need and apply the proper psychical remedy, so that hope, cheerfulness, and courage may replace depression and worry.

In the treatment of "nervousness", neurasthenia, hysteria and all functional nervous troubles, the mental impression made by the doctor is perhaps most valuable, but is no less grateful in all of the little daily ailments, which often are routinely treated, when perhaps more good could be accomplished by an understanding kindliness and appropriate sympathy. By such means we would occasionally discover, that some deeply hidden grief, or great disappointment, had been the real cause of a previously unexplainable nervous affection. To deal properly with such cases requires experience and the utmost tact, and it should be the constant effort of every conscientious doctor to cultivate diligently all those qualities of mind which at times are more valuable in therapeusis than all the whole pharmacopœia.

Correspondence.

INJURIOUS EFFECTS FROM SMOKED GLASSES.

To the Editor of the Medical and Surgical Reporter:

A patient coming to my office complained that her eyes ached after wearing smoked glasses for a short time. The examination of several pairs of smoked glasses in rubber and other cheap frames revealed the fact that often the concave exceeded the convex curve sufficiently to produce a weak minus lens.

Indeed, so often is this the case that I only prescribe smoked glasses with plain surfaces and free from any inner or outer curve whatever.

It can be readily seen how the good to be derived from wearing a tinted glass would be more than neutralized by the far-sighted patient wearing a near-sighted glass.

Richard H. Satterlee,
Easton, Pa.

Book Reviews.

LECTURES ON TUMORS, FROM A CLINICAL STANDPOINT. By John B. Hamilton, M. D., L.L. D., Professor of Principles of Surgery and Clinical Surgery, Rush Medical College, Chicago. For the use of students. Detroit: Geo. S. Davis. Paper, 25 cents.

In this work are embodied eleven lectures which are intended to give the student a practical acquaintance, in a condensed form, with the general principles, clinical history and treatment of neoplasms. The colloquial form of the original lectures has been retained, and eleven atrocious wood-cuts serve as illustrations. The lectures are very readable, and the student will find this issue of the Physicians' Leisure Library well suited for the purpose for which it was prepared.

MINISTERING WOMEN.—THE STORY OF THE ROYAL NATIONAL PENSION FUND FOR NURSES. By George William Potter, M. D. London: "The Hospital" Limited. Royal, 12mo., 131 pp.

The Royal National Pension Fund, the author says, may be said to have had its origin in the misfortunes and distress of a particular nurse.

About the year 1878, a delirious sailor was admitted into the Seamen's Hospital at Greenwich, who was suffering with typhoid fever. While the nurse was attempting to move him he spat into her face, some of the saliva entering her mouth. Notwithstanding that the nurse cleansed her mouth, she became infected with the poison and an attack of typhoid fever ensued in its most virulent form. As a result of this the nurse became a permanent invalid; her friends helped her for a time, finally, her funds failed and she went to the poor house, where she died.

The object of this fund is that of a self-helping enterprise, whereby each nurse might provide for her own future wants from her past resources. As it did not seem possible to provide enough from the nurses' small earnings to entirely accomplish this, an endowment fund was raised, which in less than three years reached $250,000. $200,000 of this was invested for the benefit of those nurses who are able to qualify for pensions by the payment of their own premiums, or who may be assisted to qualify by hospitals or benevolent persons. The remaining $50,000 was set apart as a Benevolent Fund to provide for the immediate relief of destitute nurses, and for annuities for aged and disabled nurses.

The book is a record of a noble piece of work. The profits from its sale are devoted to the Benevolent Fund.

PERISCOPE.

THERAPEUTICS.

CHLORALAMID COMPARED WITH CHLORAL.

Killsbren, in an article on Chloralamid, in the *Memphis Medical Monthly*, makes a comparison between chloralamid and chloral on one hand, and sulfonal on the other. His results are as follows:

Compared with chloral:

1. It is more agreeable to the taste, and consequently easier administered.
2. Rarely causes digestive disorders.
3. Does not depress the heart or circulation.
4. Seldom produces cerebral disturbances.

As compared with sulfonal:

1. Much more prompt in its action.
2. Being more soluble, it can be administered easier.
3. Sleep nearly always passes away by morning.
4. It is only about one-half as expensive.

A NEW METHOD OF PRODUCING LOCAL ANÆSTHESIA.

Dr. Wiesendenger describes in the *Journal für Zahnheilkunde* a new method of producing anæsthesia by the application of cold, the characteristic feature of which is that it is not the cold-producing agent which touches the desired part, but a metallic tube or chamber which is cooled by carbonic acid. The cold may, according to the requirements of the case, be regulated from the temperature of cold water to one sufficiently low to cauterize. The first symptom of this artificial cold is anæmia of the cellular tissue, producing a slight sensation of burning, which is followed by anæsthesia, which lasts from one to two minutes and then disappears without any ill effects. As the instrument may be manufactured of almost any shape, it is evident that this new method may be used for a variety of purposes. The simple turning of a tap will regulate the stream of carbonic acid to any degree of temperature down to four degrees Fahrenheit. No moisture is produced. In using this cold for the purpose of cauterizing the surgeon has the advantage of producing anæsthesia at the same time. When applying it to any of the internal cavities, such as the mouth, it is necessary to have the parts carefully dried, as the tissues would otherwise adhere to the instrument. Dr. Kummel applied the method in the case of a boy in the Maria Hospital at Hamburg with such complete success that the boy looked on without moving a muscle while a deep incision of twelve centimetres in length was made in his thigh. Other gases which can be brought into a fluid state may be used in place of carbonic acid. The carbonic acid which has been used for the purposes of anæsthesia may be led into a vessel which has been tested to a pressure of three atmospheres, and is provided with a manometer and safety valve, whence it could be used as a motor agent or for preserving food. An iron bottle of fluid carbonic acid at a pressure of fifty atmospheres is sufficient for fifty operations. This can be bought for four or five shillings. The instrument for the application of cold to the tissues costs thirty shillings.—*Lancet.*

ACTION OF SUGARS IN THE ORGANISM.

Albertoni, of Bologna (*Archiv. Italiennes de Biologie*, vol. xv, p. 321), administered by the mouth to fasting dogs various kinds of sugar, varying the amount and concentration of the sugar solution, the dogs being otherwise under normal conditions. The animals were killed one hour after being fed, and a very considerable quantity of unchanged sugar was always recovered from the contents of the stomach. Of glucose, about 60 grammes (100 grammes being introduced into the stomach) were absorbed in one hour in large dogs. Maltose, and to a greater extent saccharose or cane sugar, are absorbed even more freely (70 to 80 grammes of 100 grammes introduced into the stomach). Absorption takes place, however, more slowly after the first hour. As to lactose or sugar of milk, the quantity absorbed is much less than in the case of the other sugars, being only 20 to 40 grammes in 100. In this case the sugar is found after death not only in the stomach, but also in the intestine; and moreover, especially if the solution introduced was a concentrated one, the stomach and intestine always contain more water than the amount of water introduced. This may, perhaps, explain why lactose is a purgative, and is sometimes popularly employed as such. Another important point is that weak solutions of lactose

are absorbed more readily than concentrated solutions. In dogs, the intravenous injection of sugar (glucose, saccharose, maltose) increases the frequency of the pulse from 15 to 20 beats per minute, but the increase no longer occurs if the vagi nerves be previously divided. In man, 100 grammes of cane sugar taken by the mouth increases the pulse rate 4 to 8 beats per minute, and the effect is shown from fifteen minutes to one hour thereafter. Glucose, maltose, and cane sugar increase the blood pressure in dogs from 15 to 20 mm Hg, which is not due either to excitation of the vasomotor centres, or to paralysis of the vagi, for the pressure rises equally after section of the cord and vagi. The rise of pressure is, perhaps, due to the more energetic cardiac systole. Sugar introduced into the blood causes vasodilatation of the renal vessels as measured by the oncometer; the quantity of blood flowing out of a kidney may be doubled after the absorption of sugar. Lactose and lævulose, however, produce effects not altogether identical with those resulting from the introduction of glucose, lactose and saccharose. The former two increase the blood pressure, but they diminish the number of pulse beats. The increased blood pressure depends on their action on the cardiac systole, and the diminution of the pulse beats to the intracardiac action of these two sugars on the inhibitory mechanism. All the sugars with the exception of lævulose produce polyuria. Hence it has been proposed to use lævolose in case of diabetes, and Kulz has used it in such cases. If morphine or chloral be given to the dogs, these drugs hinder the effects of the sugar on the circulation, but they have no effect on the polyuria or glycosuria.—*Brit. Med. Jour.*

SPINAL EXTENSION.

The practice of stretching the spinal column in locomotor ataxia and other affections of the spinal cord being based on not very well determined grounds, Dr. Sliunin has recently endeavored to throw some light upon the effects produced by extension of the spine by experiments on both cold and warm-blooded animals. These were carried out in Professor Tarkhanoff's physiological laboratory in St. Petersburg, and showed that when the extension force was equivalent to about three times the weight of the frog or rabbit which was the subject of the experiment, it decreased the sensibility both to touch and to pain, retarded the reaction, and increased the blood pressure. Prolonged extension led to hyperæmia of the spinal meninges, especially of those in the lumbar region. The observations on frogs gave less marked results than those on rabbits, and in a small minority of the former the results were contradictory.—*Lancet.*

TREATMENT OF LARYNGEAL TUBERCULOSIS.

Dr. Cozzolino (*Rivista de los Hospitales*, No. 29, 1891) treats it as follows:

Internal treatment is indispensable, for no lasting result can be obtained, as the larynx is continually re-inoculated by contact with the bacilliferous sputa from the lungs. The nourishment should be strong, and above all, should consist of very nutritive substances, as milk, eggs and meat. Fowler's solution given internally in doses of fifteen to twenty drops a day, according to the tolerance of the patient, and cod-liver oil, in doses of two hundred to three hundred gms. (six to ten ounces), taken during the meal, are recommended by Prof. Jaccound. Before each meal the patient should take a small dose of a mixture of phosphate of lime and two to four drops of the balsam of Peru, the efficacy of which medicine has already been demonstrated by Schnitzler, of Vienna. If this be well supported, then the dose may be increased, and to every dose of cod-liver oil one may add three to four drops of the balsam.

Local Treatment.—Four times a day one may use the following in a spray:

℞ Aq. destillat., gms. 300 (fl. ℥x).
Alcohol restificat., gms. 10-15 (fl. ℥ ijss).
Menthol, cgms. 50-80 (grs. viij-xij).
Balsam Peru, gms. 5-10 (℥j¼-ijss.

By means of an appropriate insufflator the patient himself may be told to make an endo-laryngeal insufflation of the following powder:

℞ Calc. phosphate, gms. 10 (℥ijss).
Iodoform. pulverizat., gms. 5 (℥j¼).
Acid boric, gms, 2 (grs. xxx).
Menthol cgms. 40-80 (grs. ½-j).

If there be dysphagia present, the physician will apply cocaine before each meal to the arytenoid region. In cases of vegetating or papillomatous tuberculosis, one may perform scarification and curetting of the larynx, according to Hering. This must be done under antiseptic precautions. Cicatrization of the ulcers will take place when all the morbid tissue has been removed. This operation is impossible where the disease has extended over the whole laryngeal and tracheal mucous membrane. In such cases one may

have recourse to intra-laryngeal injections of a solution of 20:100 of menthol with olive oil, Rosenberg's method. Ten grammes (two and one-half drachms) of this solution may be injected into the larynx and trachea once daily before meals. Excellent results are obtained by this method. The painful symptoms disappear, the dysphagia ceases entirely, and the general condition improves. The menthol diminishes the tuberculous infiltration and irritation. If one wishes to act directly upon the tuberculous tissue, one may use camphorated naphthol, which has given very good results in local tuberculosis. By thus treating the affection once or twice daily, a cure can be obtained in a few weeks. This remedy is infinitely less painful than lactic acid. In some cases one may advantageously apply cocaine before each local application.

SULPHONAL IN THE NIGHT-SWEATS OF PHTHISIS.

"Dr. Erede, of Genoa, calls attention to what he calls 'the marked antidiaphoretic action of sulphonal.' He says that if given in the early hours of the evening it almost invariably succeeds in suppressing or greatly diminishing the night-sweats of phthisis. A dose of half a gramme, given in the form of pastille or suspended in some gummy vehicle, generally suffices. The largest amount given was one gramme; this failed of its effect only in a very few cases in which the disease was extremely advanced. As no untoward effects were ever noticed, even in very debilitated patients, Erede thinks that with proper precautions the drug might be pushed up to 2 grammes, the usual hypnotic dose. In many cases he observed that in discontinuing the sulphonal after a time the sweating did not begin again at once, but only after some days, when it was immediately checked by repeating the medicine. This shows that the organism does not readily adapt itself to the prolonged use of the drug, as it does, for instance, to certain narcotics. Erede is inclined to think that the effect of sulphonal in checking diaphoresis is to be explained by its action on the nervous system."— *British and Colonial Druggist.*

ARISTOL IN THE TREATMENT OF TUBERCULOSIS.

Hérard has reported to the *Académie de Médicine* Nadand's method of treating tuberculosis by the subcutaneous injections of aristol. The drug has been employed with success in the following form:

℞ Aristol.....1 c. c.
Sterilized oil of sweet almonds.....100 c. c.
Dose, 1 c. c. per day, subcutaneously injected.

Of 23 patients subjected to this treatment 7 felt so well that they considered themselves cured. No accidents were observed. The duration of treatment varied from 25 to 30 days.—*La Médicine Moderne*, Sept. 17, 1891.

THE LOCAL TREATMENT OF DYSENTERY.

Dr. H. C. Wood writes in the *University Medical Magazine*, that in acute dysentery, involving the colon high up, he has found large enemata, containing two to three drachms of subnitrate of bismuth, much more efficient than the exhibition of bismuth by the mouth. When the symptoms are severe, this local treatment may often be preceded with advantage by washing out the colon with large quantities of cold water. He has never used injections of nitrate of silver in acute dysentery, although the effect of the local application of the nitrate in other inflammations of mucous membranes would justify trial of the remedy. He has seen, in one or two cases, large enemata of very hot water injected without affording relief, and believes that hot water enemata are, in their ordinary results, not at all comparable with large injections of ice-cold water.

When the lower part of the colon is affected, the local use of ice sometimes has an almost marvellous effect. He has, indeed, seen the whole aspect of a very severe and alarming case, in which the symptoms indicated that the colon was affected high up, changed in a single hour by the continuous use of *ice suppositories*. While it is not necessary to have the pieces of ice entirely regular in shape, care should be exercised that no sharp edges are left. The suppositories should be rapidly used, one being put into the rectum every three to five minutes, so as to get, for at least half an hour to an hour, the effect of the continuous application of cold.

When the tenesmus is very severe, iodoform suppositories are often much more efficient than opium in bringing relief.

A remedy which has been from time to time recommended very highly in dysentery, but has not, he thinks, been much used, is ergot; and when the passages contain large quantities of blood, or are nearly pure blood, the extract of ergot would seem to be indicated. He has never used ergot by the

mouth in these cases, but has employed suppositories containing twelve grains of extract of ergot and four grains of iodoform, used every two hours until four or five suppositories had been taken with, seemingly, great advantage.

He does not mean to advocate the local treatment of dysentery as a substitute for the use of mercurials, purgatives and ipecacuanha, etc., but as a very important adjuvant to the older forms of treatment. Nevertheless, in my experience, the effect of local remedies has been more prompt and decided than that of drugs given by the mouth; but in cases of any severity the attack upon the disease may be made from each end of the mucous tract.

MEDICINE.

THE ACTION OF ASPARAGUS ON THE KIDNEY.

During the asparagus season, when patients are constantly asking if they may partake of this favorite vegetable, and they are assured by their medical attendant that it is both wholesome and diuretic, I wish to know if this latter character assigned to it is correct and substantiated by careful observation. I am acquainted with instances where the very opposite is the effect. The urine is diminished to half the usual quantity and micturition lessened in proportional frequency. Dr. Lauder Brunton says that the odoriferous character of the secretion is due to the decomposite of asparigin, and that one of the products is supposed to be succinic acid. Has this alkaloid a stimulating or inhibiting action on the kidney?

Dr. Samuel Wilks, in the *Lancet.*

AN UNUSUAL SYMPTOM IN MIDDLE EAR DISEASE.

Dr. R. Lake, in the *Brit. Med. Jour.* writes: That sound caused by air entering the middle ear on inflation can usually only be heard by means of the diagnostic tube, induces me to put the following case on record. Grüber says, speaking on this point, "for the more distinct perception of which [sound] the otoscopic tube is employed." Politzer, "which [sound] can be perceived either by placing the auricle immediately to the concha of the person," and also "this blowing sound has various degrees of strength and distinctness."

The patient a young lady of twenty-one, was under treatment with middle ear catarrh due to Eustachian obstruction; air would not enter the cavities of the tympani either by Valsalva's or Politzer's method, and could only be driven in through a very fine catheter; the finest Eustachian bougie failed to enter the tube at all. Hearing (watch) left normal, and right four inches; after inflation eighteen inches. On February 10th, 1891, I examined the naso-pharynx under ether, and, finding some adenoids, they were removed with Daly's scraper, and a week afterwards the nose was irrigated with an alkaline solution. After this had been employed daily for some days, my patient informed me, that when she blew her nose her left ear made a noise which her sister heard "across the room." I examined the ear, and found the drum apparently normal; the hearing of the right ear was now five feet. April 6th I was sent for and told the noise was again present. On my arrival the patient used her saline solution and inflated her tympanum. I then heard the sound, and though I stood twenty feet away, I still heard it distinctly. It resembled the sudden inflation of a small bladder. Testing the Eustachian tubes, a large sized bougie entered freely.

INCOMPLETE FORMS OF DISSEMINATED SCLEROSIS.

M. Charcot, in a recent lecture on some of the difficulties of diagnosis in case of disseminated sclerosis, brought forward two cases which are worth notice. The first was that of a woman B., who had at one time or another all the chief symptoms characteristic of the disease, but who had gradually lost some of them. She had had most marked tremor on voluntary movement, attacks of vertigo, and most irregular gait; but all these symptoms had disappeared completely except the last, which had very much improved. Still there was quite enough left to show what was the nature of her disease. She had still the characteristic "scanned" speech, the lateral nystagmus, and the exaggerated pateller reflex. The loss of the other symptoms should serve as a reminder of the variability and temporary relief that sometimes occur in disseminated sclerosis, and should lead to a particularly careful study of the past history of such patients. In the other case, a woman C., æt. 41, the mode of origin was in an attack of rheumatism with hyperpyrexia (106°. F.), and the symptoms which then developed themselves were remarkable, and carefully observed by

M. Féréol. The attack was fifteen years ago, in 1876, when the patient was twenty-six, and was most acute. It was very justly called "cerebral rheumatism." After acute articular rheumatism for ten days, there was loss of pain and complete collapse; the temperature rose to 106° F; the face was pale, the hands and feet cyanotic, the pulse almost imperceptible. A cold bath was given, and after it came some revival with signs of bulbar and spinal excitement, resembling in some points tetanus, chorea and epilepsy. Seven baths were given in eighteen hours. There was frequent opisthotonos, with the *risus sardonicus* of tetanus, the loud shouting of delirium, and varied convulsions of all parts. But after about twenty-four hours the hyperpyrexia was subdued, slight articular pain returned, and there was decided improvement in strength, and a slow convalescence began. The nervous symptoms, however, did not pass off entirely. The opisthotonos and convulsions ceased, but there remained a slight choreic movement, which developed itself gradually into a jerky motion accompanying voluntary muscular action; and the speech, which was at first irregular and hesitating, became more definitely "scanned," and the gait halting and irregular after the fashion of the gait of disseminated sclerosis. This was all developed and accurately described within six weeks of the acute rheumatic crisis in July, 1876. Up to 1880 the tremor on voluntary movement was too violent to allow her to feed herself; but in 1880, under the care of Dr. Laseque, there was some improvement, and since then further improvement, so that now she is able to move quietly almost without tremor, to walk without difficulty, and the intelligence and memory are good. There is still nystagmus, "scanned" speech, and some want of balance.—*Le. Progrès Médical.*

HEREDITARY TUBERCULOSIS.

After referring to the important part played in infantile tuberculosis by the increasing habit of artificial feeding, M. Landouzy (*Revue de Médecine*, 1891) protests against looking upon all cases of tuberculosis as arising after birth; nor does he think that the question of heredity is one of suitability of the soil alone, but also of actual bacillary infection. In the transmission of variola, whooping-cough, syphilis, etc., to the fœtus, the same difficulties are not raised as in tuberculosis. The author and M. Martin proved experimentally in 1883 that inoculation from a fœtus born of a phthisical mother, and yet with no naked-eye tuberculous lesions, would produce tubercle in guinea-pigs. The recent case reported by Birch-Hirschfield and Schmorl, where tubercle bacilli were found in the placenta, and also in small numbers in the fœtal liver, is referred to. These results resemble those obtained by Johne and by Malvoz in the case of the fœtal calf. They also agree with the experimental evidence as to the transmission of the anthrax bacillus through the cow to the calf. The rarity of tuberculous lesions themselves in the fœtus is perhaps not so astonishing. The fœtus is "bacillised," but time is needed for the bacilli to grow and fructify. If this delay in their development be granted, then hereditary tubercle resembles hereditary syphilis, but it occurs late. Thus it may be understood (1) that such a fœtus can convey tuberculosis, by inoculation and (2) that the presence of the bacilli (bacillosis) in the infant gives rise to vague symptoms referred to teething, cold, etc., and later to any of the various tuberculosis lesions. The question is next considered as to whether the fœtus may be infected from the paternal germ, the mother remaining healthy. M. Landouzy refers to a remarkable case showing that this may occur. Hereditary tuberculosis should be studied under two aspects: (1) Typical forms. The fœtus is born not only capable of receiving the bacillus, but actually containing it. The development of the bacillus may be hastened or retarded by many circumstances. (2) Atypical forms. This consists really in the transmission of a veritable diathesis. It is supposed to be due to a bacillary toxæmia, the fœtus having escaped the bacillary infection. It is a condition in which not only is no immunity against tubercle conferred, but the tissues are prepared for the reception of the bacillus. The author puts out the multilethality of the offspring of the tuberculous father—how the fœtus arrives at term with difficulty, or the infant dies of so-called congenital debility at an early age, and with no special symptoms or anatomical lesions. M. Landouzy says that tuberculosis and marriage, like syphilis and marriage, is a question of social hygiene.—*Brit. Med. Jour.*

SUBCORTICAL ALEXIA.

Adler (*Berliner klin. Wochenschr.*, 1890, No. 16) records the case of a patient, aged 52. He had an attack of apoplexy, which was probably due to embolism. There was

no previous history of mental deficiency. The attack lasted two minutes, and there was no disturbance of consciousness. There were movements of the head and the left arm. After the attack he remained in an aphasic condition, which at the end of two months had improved very little, and it appeared that the particular variety was that which Wernicke has described as subcortical alexia. The symptoms were uncertainty of seeing correctly letters when he tried to copy them, although he wrote correctly from dictation; there was some color blindness; he knew objects perfectly well although he could not name them; complete right hemianopsia was present. The author supposed the following lesions to exist: destruction of the optic fibres in the left occipital lobe, interruption of the path from the right optic cortex to the left speech region, and destruction of the commissural fibres between the two occipital lobes.—*Brit. Med. Jour.*

ON ALBUMINURIA, TRANSIENT AND DIETETIC.

Dr. Henry B. Milliard, in the *N. Y. Med. Jour.*, in writing upon this subject, states: As regards albuminuria from a prognostic point of view, if the albumin is found beyond question to be true serum albumin and not caused by cystitis, elytritis, trachelitis, etc., whether it be cyclic, permanent, transient, or intermittent, whether only traces are found or it exists in a measurable percentage, it never can be safely assumed that harm can never come of it. I speak of chronic conditions. Great vigilance should be exercised in the observation of these cases. The urinary secretion should be measured, the amount of solids estimated, and the nutrition of the system as regards growth or waste, etc., ascertained, the arterial tension and cardiac condition noted, and these data not once simply but oftener if necessary, and in many cases for a continued period. "Renal inadequacy," a very suitable term, first employed, I believe, by the late Sir William Gull—that is, incapacity of the kidneys to form and excrete the proper amount of solids, and a deficient formative capacity which usually accompanies marked albuminuria—is an important factor in the prognosis. If the amount of solids fall much below what should be voided according to the diet and weight of the patient, and that persistently, there is ground for believing that serious pathological changes are being or have been developed. The average amount of solids voided by a man in health being placed at fifty-eight grammes, any great diminution for a continued length of time of solids excreted is significant. A very close approximation to the amount of solids (in grammes) voided can be obtained by Trabb's well-known simple rule—that is reducing the number of ounces voided in twenty-four hours to cubic centimetres by multiplying by thirty, then multiplying this again by the last two figures of the specific gravity multipled by two. Of course the diet, stature, weight of the subject, amount of exercise, perspiration, etc., must be considered. Forty-eight ounces being taken as the amount of urine voided in twenty-four hours and the specific gravity being 20, we should have about fifty-eight grammes of solids excreted. The aid of the microscope should always be enlisted. In slight albuminuria and in albumina minima the microscope rarely shows any of the elements of renal inflammation. Proliferation of the connective tissue, mild catarrhal nephritis, and glomerulitis may exist for a long time unaccompanied by changes in the tubules. These in time are, however, likely to become involved, and then renal epithelial casts, blood-corpuscles and pus-corpuscles, variously, may be found. It has been a not infrequent experience with me, however, that cases have been pronounced albuminuric when the albumin has been simply an accompaniment of slight catarrh of the bladder or of the prostatic portion of the urethra. I have never seen these cases, no matter how slight, where I could not recognize albumin, sometimes not more than one two-hundredth or one two-hundred-and-fiftieth of one per cent., either by Tanret's or by my own test. If the cystitis is sufficiently marked for numerous pus-corpuscles to be found under the microscope, Heller's test will probably show a sharp line at least one ninth of a line in thickness, which indicates about one ninetieth of one per cent. of albumin. The urates, too, may show this same sharp line. But if we have renal albuminuria to deal with, if persistent, no matter how favorable all physical conditions may seem, we can not assert with perfect confidence that serious lesions may not in time become manifest, and every precaution as regards dress, diet, and care in living should be observed. I should not class as intermittent albuminuria those cases produced by hard study, taking cold, etc.

After albuminuria has existed for a long time, I have known it only in a small proportion of cases to disappear permanently,

and then after a long and rigid course of treatment. Nevertheless, I have had under my observation patients in whose urine I could always find $\frac{1}{50}$ to $\frac{1}{40}$ or $\frac{1}{30}$ per cent. of albumin for several years consecutively without the occurrence of what could be considered renal symptoms. At the same time I should, however, state that the health of these patients was seldom perfectly good. Common symptoms would be a depressed condition of the strength, loss of appetite, the uric or oxalate-of-calcium diathesis. The cases without renal symptoms of some sort at some period were, however, quite exceptional.

Permanent albuminuria, even if intermittent, according to my experience, usually implies in some way impaired health or some latent pathological condition.

As to when albuminuria may be considered cured: Not until at least a long time has elapsed, the urine being examined from time to time in the most careful manner without albumin being found, arterial tension is absent, the heart is normal, and the health is good, we may hope that the albumin may not return.

Should cases of chronic albuminuria, simply from the fact of albumin being found, be rejected by life-assurance examiners? I believe they should not. I have known some albuminuric patients who enjoyed practically good health and lived to a good age. Albuminuria is not always a more threatening symptom than *other* symptoms. An albuminuric patient may occasionally be in every respect a good risk. There are cases where repeated and comprehensive examinations must be made before the examiner can decide as to the interests of his company. There can be no unvarying rule as to this point. I have known albuminuric subjects rejected whose health was good, and applicants with other affections more serious than some of these cases accepted.

What Lecorchè and Talamon say is pertinent to this subject: "It is impossible to attach any prognostic value, direct and immediate, to the presence of albumin in the urine. Albuminuria indicates an alteration of the glomerular filtering membrane; transient or permanent, abundant or minimal, it indicates nothing else; it affords us no information as to the profundity and extent, and consequently none as to the gravity, of the lesion. To form an opinion of this, other elements of appreciation and other phenomena, general or local, must be considered conjointly with the albuminuria."

Of course, if even albumina minima or intermittent albuminuria are accompanied by arterial tension and the significant signs of cirrhosis—such as headaches, disturbances of vision and debility, and insufficient excretion of solids by the kidneys—the case is perhaps more than doubtful, and the dread *sequelæ* of advanced morbus Brightii—such as atheroma of the arteries, miliary aneurisms, loss of the renal functions—are to be expected.

Finally, all persistent albumina, *maxima* or *minima*, are always to be watched.

SURGERY.

THE VALUE OF REST IN SURGICAL CASES.

Among the works which have left a deep and lasting imprint upon the medical mind, that of John Hilton, on "Rest and Pain," must be awarded a prominent place. In his address on Surgery delivered before the British Medical Association, Professor Chiene, of Edinburgh, bears testimony to the great influence which Hilton's teachings had exercised on his own success in the practice of surgery. Prof. Chiene discussed the mental and bodily aspects of rest and unrest, and called attention to the fact that it is not work, but worry—mental unrest which kills; so that a person will bear much physical discomfort to be relieved of the mental discomfort of his condition. This is well illustrated in cases of cancer, where the refusal to operate often occasions great mental depression, while an attempt to remove a tumor—even if unsuccessful—will often give the patient a feeling of mental rest in the very thought that no stone has been left unturned in the endeavor to afford relief. There is another aspect of the mental side of disease, which, in Prof. Chiene's opinion, has not received the attention which it deserves. When a patient is confined to his bed away from his work, he is often suffering as much from the worry of mental inactivity as from the physical disease for which he is under treatment. In these cases decided improvement may be effected by encouraging the patient to do some light mental work. Diagnostic incisions are also a valuable aid in avoiding psychical unrest, for they increase the patient's faith in the surgeon's ability to choose the proper method of treatment. Pain given to a patient, whether in the dressing of a wound, or in the examination necessary to make a diagnosis, is a fertile cause of unrest, and should be avoided by every means in our power. The avoidance of movement in dressing the wound will do

much to prevent pain, and for this purpose the author recommends the many tailed bandage which permits of exposure of the wound without movement of the limb. He also points out that the use of unnecessary strong antiseptics on wounds is one of the most frequent causes of local unrest. The employment of absorbable drains will obviate the necessity of a change of dressing for the removal of the drain, and therefore may be regarded as an other aspect of Hiltonism. Although pressure and careful apposition of the edges and surfaces have to a great extent done away with drainage of any sort, it is safer to employ drains for at least twenty-four hours after operation, so as to avoid accumulation of blood in the wound and consequent delay in healing. If India rubber tubes are used they should be made to project beyond the wound surface, so that the blood and serous discharge may pass into the dressing, and have no tendency to pass along the skin surface to the edge of the dressing. To steady limbs after amputations and excisions, leaden splints are employed by the author, the splint being shaped so that it can be unfolded without moving the limb. Pressure should be applied firmly, but care should always be taken to leave the distal portion of the limb exposed, so that if it swells the bandages may be loosened. Prof. Chiene thinks that extension is not sufficiently used in fractures of the upper extremity or after excision of the knee and elbow. In fractures, injuries, and diseases of the spine, in sacro-iliac disease and fractures of the pelvis, the use of double extension is of undoubted value. In all cases in which complete rest of the trunk is called for, he recommends a thick, firm mattress made in three pieces, the central portion of which can be withdrawn for the performance of the acts of defecation and urination and the examination of the body for bed sores. In injuries of the hip he has given up the use of Nelaton's line, because in order to reach the ischial tuberosities necessary for estimating the line the patient has to be moved. Its place is taken by noting the want of parallelism between the two tapes, one passing through the anterior superior spinous processes and the other through the tips of the great trochanters. In cranial surgery the curved incision suggested by Horsley, enables us to form a flap for covering and supporting the denuded brain matter or dura. In spasmodic wry-neck where the patient is in constant unrest, relief may be afforded by excision of a portion of the spinal accessory nerve, as shown by several cases in the author's hands. In rectal surgery gradual dilatation of the sphincter ani before operation gives rest after its performance, as it is followed by temporary paresis. To afford rest to the bladder the author recommends the introduction of a gum elastic catheter to which is attached a rubber tube passing into a vessel filled with water, the latter being placed at the proper level, to produce a syphon action. Rest may also be induced by perineal section or suprapubic cystotomy. In the treatment of cut-throat the immediate performance of trachetomy and accurate coaptation of the wound facilitates rapid healing, because movement of the parts is reduced to a minimum. In the application of a bandage to varicose veins or the application of a truss, the apparatus should be applied before the patient gets out of bed and taken off after he is in bed, for if the veins are allowed to fill and the hernia to come down, the good of the previous twelve hours support of the retentive apparatus is nullified by the temporary unrest.

We have quoted extensively from Prof. Chiene's address, because of the many practical suggestions of value contained in it. The doctrine of rest as a curative factor in surgical affections is certainly appreciated by all conservative surgeons and finds in Prof. Chiene an able exponent.—*Internat. Jour. Surg.*

THE TREATMENT OF COMPOUND POTT'S FRACTURE.

Hamilton (*Liverpool Medico-Chirurgical Journal*, July, 1891) writes that although compound Pott's fracture is a rare accident, it is difficult to treat successfully. From an experience of seven cases he is convinced that it is bad practice to reduce the tibia and drain, because it is impossible to drain thoroughly, as the articular surface of the tibia fits so closely the trochlear surface of the astragalus.

He, therefore, enlarges the wound, saws off the end of the tibia, and makes a longitudinal incision three inches in length behind the fibula, and if necessary removes a corresponding portion of the fibula. Two large drainage tubes are inserted on the inner side behind the bones, and out at the wound on the outer side.

The limb is put up on a "waxed splint," which prevents the discharge running up the leg, and so necessitating a frequent change of splints. The mere fact of moving the limb sends the temperature up, and may be the beginning of much trouble after-

wards. A third factor is absolute care and cleanliness when the case first comes under observation; no sponges are used, and the cases, for the most part, are dressed perfectly dry.

ATRESIA OF THE RECTUM—ARTIFICIAL ANUS.

Dr. F. de P. Bernaldez reports a case in which an artificial anus was made for complete atresia of the rectum. The patient was a male infant, 4 days old. As his bowels did not move, they tried to apply enemata, but found no anus. All the other organs were normal. The patient was very small, and had icterus. The abdomen was enlarged and tympanitic, and its veins were swollen. At the place where the anus ought to have been, a prominent cord was felt, giving rise to the hope that the rectum was not very high up. An incision, 3 centimetres (1¼ inches) long, deepening gradually to 4½ centimetres (1¾ inches), was made, without encountering the bowel. The person who presented the baby would not allow anything further done; so the wound was sutured, and the child taken home. Next day it was brought again. The wound was re-opened, but, even at 6¼ centimetres (2½ inches), no bowel could be found. The wound was closed again, and an artificial anus established in the left iliac fossa, with good results (four and one-half months after operation).—*Revista med. de Mexico*, January 15, 1891.

EXTIRPATION OF THE VESICULÆ SEMINALIS.

At the recent French Surgical Congress, Dr. Roux, of Paris, stated that in tuberculosis of the genital organs it is a mistake to remove only the testicles, since he has often observed fistulæ and abscesses extending along the spermatic cords after castration. It is therefore necessary to extirpate not only the testicle but also the corresponding vas deferens and seminal vesicle. The author reported two cases in which after removal of the testicle the vas deferens was carefully separated from the vessels of the spermatic cord, which were then tied and divided. An incision was then made in the perineum, the vesiculæ seminalis pushed into the wound by the finger introduced into the rectum and excised, and the vas deferens entirely removed. The results were excellent.—*Le Semaine Medical.*

GYNÆCOLOGY.

THE USE OF VAGINAL TAMPONS.

Sellman (*Journal of the American Medical Association*, July 11, 1891) intends to convey in this paper his impressions of the dangers attending the use of tampons, and also to prove that on many occasions when we think that we have applied them in a scientific manner, it has been improperly done, and carried out in a manner that will do much harm to our patient and perhaps develop injuries that may require months of treatment to overcome. Vaginal tampons introduced for hæmostatic purposes are seldom required, and when used are likely to be attended or followed by great injury. He makes this exception—the use of the tampon for the purpose of provoking uterine contractions and softening of the cervix—in cases where it is desired to bring on premature labor, as, for example, cases of placenta prævia. The packing of the vagina is sometimes justifiable in cases of hæmorrhage due to the presence of uterine fibroids. In hæmorrhage occurring during the progress of cancer of the cervix it is unsafe to tampon. The presence of tampons in the vagina interferes with the evacuation of the bladder and with the proper emptying of the rectum. Tampons are responsible for the production of serious inflammatory conditions of the uterine adnexa, peritoneum and cellular tissue. He advises the application of tampons only under the following conditions: In office practice, after making an application to the endometrium, if the agent employed is likely to flow down and excoriate the external genitals. This is to be removed as soon as the patient reaches home. In cases of prolapse of the uterus, where there is no uterine catarrh—used as a pessary. Also in cases of prolapse of the vaginal walls under similar conditions. After plastic operations upon the vaginal walls, where there is no danger of hæmorrhage taking place above the point where the tampon has been placed. In cases of hyperplasia, with little or scanty secretion from the endometrium.— *Univ. Med. Mag.*

ICHTHYOL IN TUBO-OVARIAN DISEASE.

At a meeting of the Turin Academy of Medicine, on June 12th, Dr. Albertoletti reported (*Riforma Medica*) the results of an extended trial of ichthyol made by him in the Maria Vittoria Hospital on a number

of women suffering from salpingo-ovaritis, endo-, peri-, and para-metritis, etc. He used almost exclusively the sulpho-ichthyolate of ammonium, which he gave internally in pills, or by inunction in the form of pomade, or by intra-uterine injection. He sums up the results obtained as follows: Resolution in a relatively short space of time of endometritis in cases which had proved refractory to the most active treatment; absorption (not always complete however) of peri- and parametritic exudations; cessation of pain in every case without exception. The remedy, according to Dr. Albertoletti, has this marked advantage over other remedies that whilst at least equally efficacious, it is perfectly well borne in all cases, and can therefore be used when other forms of medication are inadmissible. Dr. Bergesio, in discussing the paper, confirmed Dr. Albertoletti's conclusions in every particular, and said that ichthyol seemed to be destined to solve many therapeutic problems relative to utero-ovarian disease.—*Brit. Med. Jour.*

OBSTETRICS.

PUERPERAL PSYCHOSES.

R. Olshausen in the *Zeitsch f. Geb.-u. Gynæk*, Bd. 21, 91, recommends, the division of puerperal psychoses into three classes. First, one dependent on febrile affections—infection psychoses. These are principally cases of puerperal pyæmia, and ulcerative endo-carditis, more rarely cases of so-called septicæmia. When these diseases lead to psychoses the direct cause is generally a meningitic or encephalitic affection, and especially capillary embolisms. The second division is the idiopathic without general febrile disease. To this belong the greater number of the psychoses of pregnancy, lactation and childbed, in which occasionally weakening factors, such as loss of blood, are the exciting cause. The third division is that of psychoses of intoxication after eclampsia, or in exceptional cases, from anæmia without eclampsia. In 531 cases of eclampsia there were 31 psychoses, or 6 per cent. In the Berlin Klinik, in 200 consecutive cases of eclampsia in 5¼ years there were 12 cases of primapara and 5 multipara. In several cases the psychosis was preceded by unusually long-continued eclamptic sopor. They did not by any means belong to the severest cases of eclampsia. The psychoses almost always began in the early part of childbed with hallucinations of sight and hearing. There were 2 cases of melancholia, and 2 of mania. Most of the cases had the character of hallucinatory insanity, but with unusually rapid termination in recovery. It is of interest symptomatically that in a number of the cases the pulse and temperature reached an unusual height, 160° and 102-4° without any cause. Therapeutically chloral by the rectum was the best.—*Med. Press.*

PÆDIATRICS.

CHEMISTRY OF THE STOMACH IN INFANTS.

Clopatt, (*Rev. Mens. des Mal. de l' Enf.*, June, 1891) concludes as follows:

1. The gastric juice of infants has an acid reaction.

2. In children at the breast the acidity varies very little, differing not more than from three to eight-hundredths of one per cent. at the end of the first hour.

3. Gastric digestion is accomplished without the formation of free hydrochloric acid. It is only exceptionally that analyses show the presence of traces of this acid.

4. In children at the breast the fixed chlorides show a remarkable constancy.

5. In bottle-fed children, absolute acidity is often more pronounced than in the breast-fed. At the end of the first hour there is frequently more than one-tenth of one per cent. of acid.

6. In bottle-fed infants there are other acids besides hydrochloric.

7. The quantity of fixed chlorides is more subject to variations with bottle-fed than with breast-fed infants.

8. The changes in the acidity and other qualities which are determined by analysis are not exactly proportioned to the time.

ASTHMA OF CHILDREN.

R. Blache (*L'Union Medicale*) defines asthma as a bulbous disease, in which attacks are produced by impressive irritations of the vagus or peripheral nerves, particularly the trigeminus; the reflex action manifests itself by sucessive or simultaneous spasms of all the intrinsic inspiratory muscles, intercostals, scalenæ, trapezii, etc., and by a tetaniform contraction of the diaphragm.

Blache thus classifies the disease into three forms: Pneumo-bulbous asthma, essential or nervous asthma, emphysematous or alveolar asthma, catarrhal or bronchitic asthma.

Nervous asthma governs all asthmatical pathology of children. A class of asthma in infantile pathology which holds a place whose importance increases every day as the pathogeny of the affections are better known, is the class of reflex asthmas in general; these are the cases in which the bulbous irritation does not leave the broncho-pulmonary filaments of the pneumo-gastric. The bulb is then impressed by an excitement springing from all the peripheric branches of the vagus, but again from the other nerves—as the trigeminus and the cutaneous nerves—so that nasal asthma, pharyngeal asthma, amygdaline, gastric asthma, and cutaneous asthma belong to the category of dyspnœas. Nasal asthma has only been known a few years; Voltolini, in 1874, published the first facts relating to mucous polypi determining the approach of transient dyspnœa. Mucous polypi are rare in children; but, on the contrary, adenoid tumors are very frequent and a usual cause of nasal asthma. Hypertrophic rhinitis is also a frequent cause; this may be a primary disease or follow successive attacks of acute coryza, or infectious fevers, as measles and typhoid fever; it may be secondary to another nasal lesion, malformation of the nose, deviating thickness of the partition, foreign bodies, affections of the naso-pharyngeal canal, catarrh, and adenoid growth. More than this, this rhinitis is at times connected with diseases which attack the stomach (Bouchard, Ruault), the intestines (Secchi, Buck), genital apparatus (J. Mackenzie, Joul).

With such a child, predisposed to bulbous irritability, either by diathesis or heredity, and to nasal erectibility following the preceding lesions, an attack of asthma may be brought on by congestion following cold, by the action of vegetable or animal powders, by the influence of odorous matters, by the contact of a probe on the pituitary gland, by an untimely nasal irrigation, and by remote causes, stomachic, intestinal, or genital excitations.

The treatment recommended for the attack is fumigation by belladonna cigarettes, henbane, or the leaves of datura stramonium, nitre paper, inhalations of oxygen, or ioduret of ethyl, but in many cases the hypodermic exhibition of morphine will be required to produce even momentary relief. In a general way, opium ought to be very prudently used with children; belladonna is much safer and can be used longer. Bretonneau and Guersant mix one centigramme of the extract to one centigramme of the powder of belladonna, giving this each day and continuing for some time. The tincture of lobelia inflata may be given in a dose gradually raised from 20 to 100 drops. Moncorvo remarks that the endurance of children for the treatment permits him to raise the dose 10 and 12 grammes in twenty-four hours. Blache has obtained excellent results from tincture of grindelia robusta, which he gives to children in doses of from 15 to 60 drops. Inhalations of vapor of pyridine, advised by M. Sée, having helped Blache to lessen the force of the attack. According to Laborde and Daudrie, this substance lessens excito-motor force, dilates peripheral vessels, and has a paralyzing action on the vaso-constrictor nerves; hence it increases the fulness of respiration, at the same time the respiratory movements regulate themselves and diminish in frequency. The curative treatment of asthma limits itself to the almost exclusive use of iodine, particularly the iodine of potassium. The anti-dyspnœac effects of this agent on the brain, and particularly on the bulb, are certain; Binz states that it paralyzes the nervous functions and produces narcotism; in every case it moderates the exciting power of the vital centre and regulates the distribution of the nervous influx.

Asthmatics presenting hyperæmia of the nasal mucous membrane are more easily affected with iodism. In cutaneous asthmas iodine may also be contra-indicated as aggravating the skin condition. At times the emaciation and loss of strength make it necessary to interrupt the treatment. Pyridine by aspiration, tincture of grindelia, arsenic, and aërotherapy by compressed air are, then, the only means which remain at the disposition of the practitioner. The iodine treatment is applicable to non-diathetic asthma; it is contra-indicated when the disease has a telluric or hereditary origin—for example, in the arthritic or gouty—a medication favoring incomplete nutrition or modifying the morbid secretions will be indicated. Asthmatics tainted with paludalism will require quinine in combination with iodide of potassium.

Blache agrees with Simon that the value of certain health resorts cannot be overestimated; the former gives the preference to the waters of Mont-Doré, stating that their sedative and decongestive properties have produced good results, particularly in the pneumo-bulbous form; in herpetic asthma children as well as adolescents will find the

sulphorus medication good. Bigorre, Saint Honoré, and Alevard may be recommended. —*Amer. Jour. Med. Sci.*

HYGIENE.

EFFECTS OF VENTILATION ON MICRO-ORGANISMS.

Dr. Richard Stern has made experiments on this subject in a room in which he could have quiet air, or a more or less complete ventilation. The openings in the walls of the room were so arranged that he could admit the air from without either at the upper part near the ceiling and convey it off near the floor on the opposite side of the room (winter ventilation), or the air could be admitted near the floor and conducted out on the opposite side of the room near the ceiling (summer ventilation). The rapidity of the ventilation was also under complete control. The air of the room was intentionally loaded with micro-organisms. Pure cultures were mixed with the dust collected from school-rooms and factories. This was then dried and pulverized and blown about the room. The air was then examined for the number of micro-organisms, by Petri's method at various times. The conclusions arrived at were: (1) That the micro-organisms rapidly sink to the floor in quiet air. The finer the dust upon which the micro-organisms rest the slower the gravitation. (2) The usual ventilation, effecting a renewal of air from one to three times an hour, has no effect upon the removal of micro-organisms with summer ventilation, and only to a very limited extent with winter ventilation. (3) Ventilation, effecting a more rapid renewal of air (six or seven times to the hour), effects the removal of micro-organisms, but slightly without a sensible draught. (4) A rapid and complete removal of the micro-organisms from the air is only attainable with a strong draught. (5) Micro-organisms are not blown off from the floor, walls, furniture, clothing, etc., even with the stronger draughts. (6) The evolution of steam in a room is not capable of rapidly and completely precipitating the micro-organisms, although it hastens this process to an appreciable extent.—*Boston Med. Surg. Jour.*

DIMINISHED DIGESTIBILITY OF STERILIZED MILK.

In a joint paper by Professor Leeds and Dr. E. P. Davis,(*Amer. Jour. Med. Sciences*) the former describes the starch liquefying ferment in milk which renders starch paste entirely fluid and capable of passing through a filter. This ferment is coagulated and destroyed by sterilization, which also has the effect of rendering the casein less rapidly coagulable by rennet. The peptic and pancreatic digestion of sterilized milk (that is, sterilized at 100° C.) is less complete than that of raw milk. Professor Leeds believes that milk may be rendered "practically sterile" by heating to 68° C. (155° F.) for six minutes without suffering any important diminution in its digestibility; ordinary commercial milk being always more or less acid on delivery, it is necessary before sterilizing in this way to neutralize or render it slightly alkaline with carbonate of soda or lime water. A still more advantageous method is said to be sterilization and peptonization at the same time, "the proteid matter of which the micro-organisms are composed being digested away and their vitality destroyed." This is effected by maintaining the peptonizing mixture at 155° for four minutes. Dr. Davis deals with the results of observations made on infants in the Philadelphia Hospital. Acute enteritis subsided under the use of sterilized milk, and no case of cholera infantum occurred in the hospital; cases of acute diarrhœa treated as out patients by sterilized milk speedily recovered. On the other hand, it was found that though exempt from acute intestinal disorders, nutrition did not improve, and the infants died in two or three weeks of malnutrition. Infants removed to a different atmosphere and given fresh raw milk rapidly improved. The infants while in hospital were also subjected to antiseptic intestinal treatment. Koplik(*Archives of Pediatrics*) gives a summary of previous observations upon the effect of sterilization on the digestibility of milk. Hueppe recognized a change in chemical composition occurring gradually at all temperatnres between 75° C, (155° F.) and 100 C., but thought that the digestibility was scarcely diminished. Munk, Hueppe, and Chapin have all pointed out that the casein of milk suffers a change in sterilization, and is less easily coagulated by rennet. Hueppe found that milk was more rapidly and certainly sterilized and protected from subsequent acid fermentation by steam than by the boiling bath (twenty minutes in the former being equivalent to one hour in the latter.) Hirst has suggested the addition of pancreatin before sterilization "in order to digest and help the digestion of

casein made difficult of digestive solution during steaming."

MEDICAL CHEMISTRY.

AMMONIUM SELENITE AS A REAGENT FOR THE DETECTION OF THE ALKALOIDS.

Lafon (*Amer. Jour. Phar.*, 1886, p. 250) called attention to ammonium sulpho-selenite as a reagent for morphine and codeine. He prepared it by dissolving 1 gm. ammonium selenite in 20 cc. concentrated sulphuric acid. The author has studied the reagent further in its reaction with other alkaloids, placing small portions of the alkaloids in his experiments upon watch glasses set upon white paper. The following is the table he has prepared:

Atropine.—No coloration.

Aconitine.—No immediate coloration; after 20 minutes, a very slight rose-color.

Berberine.—Greenish yellow, becoming successfully very brown rose at the margins and violet in the middle; half an hour afterwards entirely vinous red, which lasts for three hours.

Brucine.—Reddish or rose color, becoming pale orange; half an hour after, an amber color, and no deposit.

Caffeine.—No distinct coloration. At end of three hours, the liquid was reddish, and there appeared a slight deposit.

Cinchonine.—Nothing.

Cinchonidine—Nothing.

Cocaine.—After half an hour, no decided coloration or precipitate. After three hours the same reaction as caffeine.

Curarine.—Slight violet coloration; after some time reddish. No red deposit at the end of three hours.

Delphine.—Slightly reddish coloration, passing into a violet red. No ppt. at the end of three hours.

Digitalin. No immediate color. Yellowish after half an hour. After three hours a reddish deposit.

Eserine. Lemon yellow color, turning to orange. Three hours afterwards the color was paler.

Morphine.—Bright greenish blue; half an hour after maroon yellow and no deposit. After three hours, the liquid maroon brown, no red deposit.

Narcotine.—Bluish color, becoming violet and then reddish. After half an hour a fine reddish color and no ppt. After three hours a small red deposit.

Narceine.—Yellow-green color, becoming brownish, and after half an hour reddish. Afterwards a red deposit, which is very distinct in two or three hours.

Papaverine.—Bluish color; the liquid becoming bottle-green, dirty yellowish green, violet blue, then red. A small bluish deposit.

Pilocarpine.—Nothing.

Solanine.—Canary yellow, and then brownish. After half an hour, a rose colored ring, and after three hours the liquid becomes violet red.

Saponin.—Yellowish, becoming slightly reddish. (Reaction not distinct.)

Senegin.—Light, dirty yellow. After three hours, liquid reddish.

Veratrine.—Indistinct yellowish color, sometimes with a green tone. After half an hour yellow. After three hours, deposit red and liquid yellowish. (Reaction indistinct.)

PREPARATION OF ABSOLUTELY PURE HYDROGEN PEROXIDE SOLUTION.

According to Crismer, absolutely pure hydrogen peroxide solution is best prepared in the following manner:

Barium peroxide is mixed with water [and made into a thin milk], then decomposed by hydrochloric acid of the specific gravity 1.100, and the solution afterwards shaken with ether. The latter dissolves out a portion of the hydrogen peroxide. It is separated and shaken with pure water, to which it yields a portion of the dioxide. The ethereal solution is now separated and again brought in contact with a fresh portion of barium solution. The same operation is repeated several times. Finally there is thus obtained a solution containing 0.5 to 0.9 per cent. of hydrogen dioxide which is absolutely neutral and free from other constituents. It contains no chlorine, but a little ether which assists in its preservation, and which may be removed, if necessary, by distillation in vacuo. The percentage of pure hydrogen dioxide diminishes very slowly by keeping.—*Bull. Soc. Chim. Paris and Chem. Centralbl.*

NEWS AND MISCELLANY.

POLYCLINIC EVENING LECTURES.

The Faculty of the Philadelphia Polyclinic deliver two evening lectures a week at 8 o'clock, during the course of 1891 and 1892. The following lectures are announced:

Oct. 27.—Dr. C. K. Mills, "Aphasias, and How to Study and Treat Them."

Oct. 30.—Dr. G. Belton Massey, "Some Everyday Experiences in Electro-Gynæcology."

Nov. 3.—Dr. Edward Jackson, "Shadow Test."

Nov. 6.—Dr. B. F. Baer, "A Plea For Early Diagnosis."

Nov. 10.—Dr. Edward Jackson, "Shadow Test."

Nov. 13.—Dr. B. F. Baer, "The Treatment of Retro-Displacements."

Nov. 17.—Dr. T. S. K. Morton, "Appendicitis."

Nov. 20.—Dr. R. W. Seiss, "Treatment of Aural Pain."

PROGRAMME OF THE SOUTHERN SURGICAL AND GYNÆCOLOGICAL ASSOCIATION.

The following is the preliminary programme of the session of the Southern Surgical and Gynæcological Association, to be held in Richmond, Va., Nov. 10th, 11th and 12th, 1891:

PAPERS TO BE READ.

The President's Annual Address—Louis S. McMurtry, M. D., St. Louis, Mo.

Remarks on Systematic Infection from Gonorrhœa, Illustrated by Cases—Bedford Brown, M. D., Alexandria, Va.

The Rational Treatment of Peritonitis Based upon the Consideration of the Pathological Conditions Present—W. D. Haggard, M. D., Nashville, Tenn.

A Medico-Legal Aspect to Pelvic Inflammation—W. W. Potter, M. D., Buffalo, N.Y.

Complications in Pelvic Surgery, and How to Deal with Them—Joseph Price, M. D., Philadelphia, Pa.

Cholecystotomy—Report of Case—52 Gallstones and 10 Ounces of Pus Removed—Success—W. B. Rogers, M. D., Memphis, Tenn.

Some of the Complications of Psoas Abscess—J. McFadden Gaston, M. D., Atlanta, Ga.

Laparotomies Performed in the Past Year—Thomas Opie, M. D., Baltimore, Md.

Imperforation of the Rectum—Geo. Ben. Johnston, M. D., Richmond, Va.

A Case of Induced Abortion for the Relief of the Nausea and Vomiting of Pregnancy, with Remarks—Christopher Tompkins, M. D., Richmond, Va.

The Principle of Drainage as Applied to Surgery of the Deep Urethra—F. W. McRae, M. D., Atlanta, Ga.

The Neuroses of the Genito-Urinary System in the Male—Frank Lydston, M. D., Chicago, Ill.

Nephrectomy, with Report of Cases—Edwin Rickets, M. D., Cincinnati, O.

Venomous Serpents of the United States, and the Treatment of Wounds Inflicted by Them—Paul B. Barringer, M. D., University of Virginia.

A Report of Some Additional Cases of External Perineal Urethrotomy Without a Guide—J. Edwin Michael, M. D., Baltimore, Md.

Growth of Fibroid Tumors of the Uterus after the Menopause—Jos. Taber Johnson, M. D., Washington, D. C.

The Part the Shoulders Play in the Production of Laceration of the Perineum, with Suggestions for Its Prevention—W. D. Haggard, M. D., Nashville, Tenn.

The Pedicle in Hysterectomy, How Formed; Its Subsequent Behavior; Its Final Condition—I. S. Stone, M. D., Washington, D. C.

A Case of Pelvic Abscess—John Brownrigg, M. D., Columbus, Miss.

A Case of Cyst of the Mesentery, with Remarks—J. A. Goggans, M. D., Alexander City, Ala.

The Female Urethra—K. P. Moore, M. D., Macon, Ga.

Medico-Legal Aspect of Intestinal Surgery—J. D. S. Davis, M. D., Birmingham, Ala.

Albuminuria; Its Relation to Surgical Operations—J. W. Long, M. D., Randleman, N. C.

Senile Gangrene—Frank Prince, M. D., Bessemer, Ala.

Hæmorrhage *versus* Shock—W. L. Robinson, M. D., Danville, Va.

Treatment of Gallstones, with Report of Cases—W. E. B. Davis, M. D., Birmingham, Ala.

(Title of paper not determined)—Hunter McGuire, M. D., Richmond, Va.

(Title of paper not determined)—Duncan Eve, M. D., Nashville, Tenn.

(Title of paper not determined)—A. L. Brokaw, M. D., St. Louis, Mo.

(Title of paper not determined)—Chas. A. L. Reed, M. D., Cincinnati, O.

(Title of paper not determined)—W. F. Westmoreland, M. D., Atlanta, Ga.

LOUIS S. MCMURTRY, M. D., President.

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Clinical Lecture.

CONSTIPATION A PRIMARY CAUSE OF TYPHLITIS, PERITYPHLITIS AND APPENDICITIS.*

BY JULES SIMON, M. D.,
OF PARIS.

The surgical study of typhlitis, perityphlitis and appendicitis has of late been the subject of very interesting researches. The relative safety which attends at the present time the great intra-abdominal operations, renders favorable the results obtained even in the most trying cases. Thus, to-day it is possible to treat with success abscesses of the iliac fossa, perforation of the appendix vermiformis, peritoneal adhesions, peritonitis and similar disorders. The truly medical aspect, so to speak, of the diseases in question, which seems to be absolutely disregarded, deserves our closest consideration.

Before the inflammation is established, patients with few exceptions, pass through a condition more or less characterized by inactivity and engorgement of the cæcum, and I will endeavor to show you the long succession of symptoms, the interpretation of which is apt to escape the observation of the most skilful clinician.

There was admitted into the ward of our Hospital, a boy nine years of age, suffering from a very pronounced attack of peritonitis. He states that his ailment came on, the day previous to admittance, as a result of a blow received on the abdomen. On the contrary, his family history shows that he has been suffering for several months, and for the last two months he has complained of abdominal pains to such an extent that he has been unable to walk. This indicates in a clear manner that the original cause of the complaint which required his admission to the Hospital depends upon an irritated condition of the cæcum which dates some time back. In all the cases that I have studied I have met with the same symptoms and the same order of phenomena. The present instance is a self-evident example.

One of my private patients, a young girl who had suffered in her infancy from a severe constipation, exhibited at the age of six years, an obstruction of the cæcum, followed by a diarrhœa and inflammation of that part. I put her under treatment, and three weeks after all the symptoms had disappeared without a trace of induration. At this time I seriously warned the mother to pay personal attention to the danger of allowing the child to become constipated, and of the necessity of keeping the fæces in proper condition, making her understand that a relapse, which frequently occurs, would place her daughter in great danger. I insist on the fact that parents do not understand the symptoms accompanying constipation in children. They are ignorant of what these symptoms signify, and as long as the child has a passage, they pay no regard to the quantity or the quality of the stools. In spite of my timely warning my advice was disregarded and a year later the girl was taken with a typhlitis, followed by an appendicitis and a fatal perforation of the appendix. The child died in the country in such a terrible agony that I believed a perforation of the appendix had occurred. I was present at the last moments of the patient, and I could see how the physician had been dealing unsuccessfully with an uninterrupted and typical course of symptoms. It is to me apparent that if the perforation had been the ultimate cause of death, it was being prepared, as it were, for a considerable time back by the inflammation and gradual dilatation of the cæcum and appendix.

To resume, a condition of chronic constipation has produced in this girl a dilatation of the cæcum, where accumulated fæcal

*Delivered at the Hospital des Enfants.

matters gave rise to irritation of the intestinal walls followed by distension of the cæcum. Inflammation again set in, owing to impaction of fæcal matters in the cul-de-sac, and that, naturally, was followed by ulceration, perforation and the inevitable peritonitis.

In all the cases observed by me in private practice and in the wards of the Hospital I have noticed the same train of pathological phenomena, and in those instances where a special hygienic method has been observed and special treatment followed of which I will speak, the patients have always escaped the untoward symptoms mentioned.

The premonitory period of the disease is characterized by: Constipation followed by fæcal impaction which may end in resolution, but a relapse often occurs, and then it either disappears entirely or gives rise to dilatation and thickening of the intestinal walls; and finally, under various causes, depending on the character of the food ingested or the excrementitious matter formed, or under the action of cold, etc. etc., the acute inflammatory disease may come on slowly but progressively upon the walls of the intestine, or with sudden violence upon the appendix.

The beginning of the symptoms can be traced ordinarily to the age of from 4 to 6 years. This pathological state may be divided into three distinct epochs: 1. Simple constipation; 2. Engorgement of the cæcum; 3. Stercoræmia and its effects upon the general system.

Simple constipation constitutes the initial symptom. This constipation is continuous, coming on and continuing without other apparent cause than the result of taking a large amount of food without being properly masticated. It alternates with lienteric passages. The stools are nearly always glairy and bilious. The child gradually evinces a lack of energy, a sickly appearance, becomes peevish and loses his appetite. At this period palpation reveals nothing but an accumulation of fæcal matters. After evacuation there is softening of the part. Following an apparent return to the normal state, the same phenomena are reproduced.

If the constipation continues, it ends in the production of a subacute inflammation, a clammy condition of the walls of the cæcum; and then the second period sets in. Palpation then reveals no softening of the part. Reflex manifestations become marked and the child is troubled with a disturbed sleep. At times, he complains of headache, his intelligence is blunted, there is loss of memory, his disposition is soured, and his appetite becomes capricious or is entirely lost. The tongue is coated, and digestion slow and imperfect. There is then noticed a febrile reaction and a tendency to chills. Sometimes pain is felt at the iliac fossa, which may be of a dull nature. These symptoms often resemble those provoked by an attack of coxalgia. After exposure or fatigue the symptoms may take a more acute character, and the pain is frequently accompanied by vomiting.

When prolonged, the affection exercises a pernicious influence upon physical and mental development. Without producing an aggravated condition of the local symptoms, anæmia makes its appearance to an alarming degree. The aspect of the child is then that of an advanced phthisical patient. The absorption of toxic intestinal matters causes an irregular fever, and a sallow, dull, earthy pallor. This group of symptoms, together with the pains and alternating condition of constipation and engorgement of the cæcum, may convey the impression of the existence of tubercular peritonitis. The persistence of such serious symptoms endangers life directly, without surgical complications. When a patient has reached such an advanced stage of the disorder, a cure is always with difficulty and slowly obtained.

At the patient's bed the progress of the malady never takes a regular course. The disease is attended by ameliorations and relapses which make its duration and progress of an indefinite character. The reflex symptoms are worse at times than would seem to be proportionate to the affection itself, among them we may have insomnia, cephalalgia, anæmia, dyspepsia—troubles which are the first to call the attention of parents. It is then that you are called in consultation.

Inflammatory symptoms may appear at all periods of the disease. Simple constipation alone may give rise to perityphlitis without producing any disturbance of the general system; and again, as you have seen, the affection may be of a long duration, bringing about serious troubles due to stercoræmia, but without other pathological complications than a local engorgement of the cæcum. I believe such initial beginning of perityphlitis to be an exceptional one, the disease being usually preceded by a long period of simple constipation. Of late, much stress has been laid on the perforation of the appendix. Of course, it is easy to conceive how a foreign body, irregular in shape, may perforate a sound appendix; but this acci-

dent will occur more frequently when there is a stagnation of fæcal matters in the cæcum, or when there is engorgement of the intestinal walls. This engorgement is accompanied, as I have often observed in post-mortem examinations, by a true dilatation of the vermicular orifice which has facilitated the entrance of foreign bodies. In such cases, appendicitis should be looked upon, not as a primary, but as a secondary condition.

The gravity of pericæcal inflammation and suppuration is familiar to you. In the most favorable cases the pus may find its way out through the skin, but the abscess may also open into the rectum, as I have noticed in a case of private practice.

Surgical interference has given good results in the most desperate cases. While I admit the justifiability of such procedures, let me insist on the importance of an early diagnosis which will prevent those measures. If simple cæcal engorgement, even without perityphlitis, is difficult to cure, suppuration constitutes a very serious and tenacious lesion. After an operation the patient may, for the time being, be relieved of the immediate symptoms due to the local suppurating processes, but the inertia of the cæcum continues to give rise to grave reflex symptoms.

In making a diagnosis we are often misled by parents, and are at a loss to account for the symptoms exhibited by the little patients. Many children are brought here to be treated for cephalalgia, dyspepsia, anæmia, arrest of development, or similar troubles, when the true cause of the ailment is a simple constipation. An examination of the iliac fossa will reveal to us a suspicious condition of affairs. You must not confound the engorgement which results from constipation with the condition produced by perinephritic inflammations, by ovaritis, by abcesses, and by adenopathies from diverse causes. It is necessary, in order to make a correct diagnosis, to consider the malady in question as if it existed. Besides the cæcum, it is always advisable to examine the iliac fossa, when you will often find a stagnation of fæcal matter.

If the diagnosis of cæcal engorgement is comparatively easy, it is easier still to determine the degree of the lesions present. Without speaking of the period of suppuration nothing is more difficult to appreciate at first than the inflammation of the intestinal wall and of the appendix. The duration of the disease, the glairy nature of the fæces, the persisting retention, even after evacuation of the bowels by means of a purgative, all indicate the presence of the malady, and diminish, as you can understand, the chances of a definite recovery.

From an ætiological point of view, the disease starts, as I have pointed out at the beginning of this lecture, ordinarily at the age of from 4 to 6 years. Children suffering from this disorder sometimes have had severe enteritis early in life. I have often observed a true inheritance, parents showing a history of tenacious constipation. The little patients are frequently extremely nervous, and may exhibit tendencies to hysteria and epilepsy. You know also how constipation is a frequent symptom of cerebral disorders of childhood. As occasional causes, an inconvenient dietetic regimé ranks in the first place. Tough meats and imperfectly cooked or improperly masticated food constitute one of the great causes of cæcal engorgement. Castigation of children, in the form of blows or lashing, often provokes a relapse of subacute inflammation, and cold acts in the same way. The disorder often follows cold baths and indigestion, and is frequently provoked by the ingestion of cold meats.

With these facts of ætiology you can conceive what the most important therapeutic indications should be. With regard to diet you must avoid all indigestible or tough food, and at the start you can allow beef and vegetables *well-cooked*, to be taken slowly and at regular hours. Tea, coffee and wines are to be avoided. Beer, mixed with Vals or Pouges water, may be considered as the best drink. Supper must be very light.

In the treatment of neurasthenia, friction with flannel dipped in cologne water are of great service. With regard to the management of impacted of fæcal matters, you must never employ strong purgatives; you had better use, at the beginning, for this purpose, the fatty and mucilaginous substances. You can prescribe in the morning, for instance, two tablespoonfuls of the oil of sweet almonds, with the addition of a few drops of castor oil. On the following morning, a tablespoonful of macerated flaxseed together with some syrup of rhubarb. From time to time replace these laxatives with mineral water. The preparation known under the name of Ricinol can be given in half a tablespoonful doses in coffee, to young children, and double this amount to older patients. This medicament is well borne and constitutes a good way of varying medication.

In the tenacious form of the disease, belladonna and hyoscyamus are the best substances to use in combatting the dryness of the mucous membrane and atony of the mus-

cular walls of the intestine. You will order these agents in the form of pills, each containing a centigramme of the extract of belladonna and a centigramme of the extract of hyoscyamus, or a centigramme of the powdered leaves of belladonna and a centigramme of the hyoscyamus extract. To a child 4 years of age you can give from two to three pills in the course of twenty-four hours. The tolerance of these drugs is far greater than that of opium, and the doses may sometimes approach those used in adults. Nux vomica is also a good remedy to employ to provoke contractions of the intestinal walls, and its use may be alternated with that of belladonna and hyoscyamus. You can prescribe a mixture containing one part of Baume's tincture and 20 parts of tincture of rhubarb, cascarilla or aniseed, (or one drop of Baume's tincture), at the beginning of each meal.

I would also advise you to employ frictions and massage, both of which are useful in exciting contractions. Besides, you can use a liniment composed of 10 grammes of the tincture of nux vomica and 40 grammes of the oil of chamomile. In this way, an absorption of the former drug can be obtained, which has the same effect as when administered internally. Finally, electricity in the form of simple faradic or galvanic currents, intra-rectally applied, is equally good.

CHRONIC GASTRITIS TREATED BY LAVAGE.*

BY H. M. FISHER, M. D.,

PHILADELPHIA.

The man before us is 49 years of age, and was admitted to the Hospital on September 1, 1891, complaining of very severe colicky pains in the abdomen. The pain, which was evidently due to catarrh of the small intestines, was relieved by small doses of epsom salts and laudanum. He continued, however, to complain of epigastric pain, and, upon careful questioning, it became apparent that he had suffered for some months with severe attacks of pain and vomiting. The ordinary methods of treatment were tried; he was placed on bismuth and calomel in small doses; he had daily doses of Carlsbad salt (ʒj to ℥j of hot water); diet was regulated and for several days his food was restricted to peptonized milk. But, in spite of this treatment, he continued to complain of pain, and vomited about once a day. Seeing how utterly futile the above treatment was, it occurred to us that digestion was probably rendered difficult or impossible by an accumulation of mucus in the stomach, and that it would probably be necessary to cleanse the stomach of this before we could hope to obtain any marked relief.

Experience has shown that a soft rubber tube can easily be swallowed by a patient who is willing and anxious to co-operate with the physician, and who is not very nervous or irritable. This patient has already swallowed the tube two or three times, and you see, as my resident, Dr. Miller, passes the tube well back on the epiglottis and asks him to swallow it, it passes down the œsophagus naturally and without apparently causing the patient any marked discomfort. As it passes the epiglottis and compresses slightly the posterior portion of the larynx, a slight choking sensation is generally experienced, but with the descent of the tube, this sensation gradually passes off. The tube is now in the stomach, and Dr. Miller proceeds to pour directly into the stomach, through the funnel at the upper end of the tube, the alkaline solution (about half an ounce of bicarbonate of soda to one quart of water). After the stomach is full, depressing the funnel causes emptying of the stomach by siphonage. This process is gone through with every second or third day.

There is no question that the long continued use of lavage may be injurious, and may tend to impair the function of the peptic glands, but in some cases, the first effects in relieving the patient of distress and enabling him to digest food, which he for weeks has been utterly unable to do, are certainly most encouraging. The patient feels much better after this treatment. For two or three days he has had no food at all by the mouth, and was put entirely upon nutrient enemata consisting of the white of an egg, ℥j of Carnrick's beef peptonoids in powder, and ℥vj of peptonized milk. You know that in introducing food into the bowel, it is important to peptonize it, because the glands of the rectum absorb, but do not, except perhaps in a very feeble degree, peptonize food. The bowel is thoroughly washed out by an enema of soap and water, once a day, about two hours before the nutrient enema is introduced; and, to prevent excessive irritability of the rectum and secure attention

*Delivered at the Pennsylvania Hospital, Philadelphia.

of the enema, about one-sixth of a grain of morphine sulphate is added to the enema. Yesterday, he was put upon a small amount of milk. To-day, he tells us that he feels a great deal better. He complains somewhat of hunger, and I think he can now digest much larger amounts taken by the mouth. I hope he will gradually be able to live as do other people; however, it is not impossible that there may be, in this case, some obstruction at the pyloric orifice.

We may have here to deal with a case of dilatation of the stomach, brought on by long continued gastric catarrh. Further study of the case will doubtless throw light on this point, but, in any case, we must be prepared to expect a very slow recovery, as this condition is one that has probably been gradually developing for years past, and the whole nutrition of the mucous membrane of the stomach is altered, and it may take months to restore the normal conditions, if, indeed, they can ever be completely restored.

METABOLIC ELECTRIC POLARITY AND ELECTRO-THERAPEUTICS.*

BY WILLIAM JAMES MORTON, M. D.,
NEW YORK CITY, N. Y.

The main contention of this paper is, deductively, that since the normal and morbid processes of living tissues proceed by chemical exchanges (plus a directive tendency which is unknown) from the assimilation of food through excretion, viz., by metabolism, differentiated into anabolism and katabolism; and since it is probable that chemical exchanges of this nature cannot take place without the exhibition of electric polarity and electric currents and since experimentally this electric polarity is demonstrable (facts of animal electricity); and since, as claimed by the writer, this polarity must, if due to the chemical exchanges of metabolism, be initially and invariably electro-positive in its internal circuit, because katabolic and therefore initiated by the avidity of the oxygen atom (or its congeners) for the atoms of the tissue subject to combustion; and since, if, as further claimed, this polarity be admitted to be due to chemical changes, it must equally be admitted to represent, not alone a transformation into electric energy but also the transformations into heat, mechanical force and all the kinetic energies of the living organism.

Therefore, as a consequence, this initial, invariable electro-positive polarity may be regarded in the important light of being equally an invariable guide to the electro-therapeutist.

And as regards disease (and equally normal processes,) focal positivity, (corresponding to the zinc element of a voltaic cell), may be ascertained to be an invariable element of its progress and consequently may be combated by an inverse current or applied extraneous medical polarity which may augment, annul or reverse the initial focal positivity and therefore augment, annul or reverse the chemical exchanges underlying it.

To employ this guide in practice, metabolism, normal and morbid, but for the time being confining attention to morbid metabolism, may be said to consist of:

(*a*) Overactive chemical exchanges, and

(*b*) Underactive chemical exchanges.

In over-activity:

(*a*)An applied (medical) positive pole will increase the activity, *i. e.* augment the disease.

(*b*) An applied negative pole will decrease the activity, *i. e.* palliate or cure the disease.

In under-activity:

(*a*) An applied positive pole will increase the activity, *i. e.* palliate or cure.

(*b*) An applied negative pole will decrease the activity, *i. e.* augment the disease.

Two curative directions only of treatment are open, viz. the negative pole in over-activity and the positive pole in under-activity.

The above four results may be obtained experimentally by applying a voltaic battery to a single voltaic cell, as indicated.

What may be true of morbid processes is held to be equally true, on parallel lines, of normal processes.

The "current of action" or "negative oscillation" may be explained upon the supposition that unstable endothermic substances formed by protoplasmic voltaic action at the negative element during repose are decomposed (by aid, for example, of an initial neural impulse) and produce an electric current in an opposite direction.

The chemical, oxidizing, katabolic, protoplasmic foci of all the liberated energies are ascertainable by the peculiarity of one of them—the electric—that it exhibits polarity.

The polarity of metabolism, crudely speaking, may be said to be the signal flag

*Abstract of a paper read before the American Electro-Therapeutic Association, Sept. 24, 1891.

which flies at the initial chemical sources of the disease to guide the electro-therapeutist. And even if the writer's view that all morbid processes must be, initially and invariably, electro-positive, be not found to hold good in all diseases, still the suggestion to adopt polarity as a guide and to base treatment by applied currents, upon the principles outlined, will remain fixedly applicable in practice.

MALARIAL HÆMATURIA. *

BY J. B. HAMILTON, M. D.,
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The history of this disease seems to be veiled in obscurity. Go to our text-books, and they are almost silent. I have consulted Bartholow, Flint, Loomis and Da Costa, and lo! only a paragraph or two is to be found. Now, why is this? Is it because these men have always practiced medicine in large cities, where the morbific cause of this disease is not prevalent? I know not. But I do know that they are almost silent. It is only in the medical journals, then, that we can find any information, and even here what we seek, on some points at least, is meagre, unsatisfactory and ambiguous.

Malaria is said to prevail from 42° north latitude to the Gulf. It would seem that there is a consensus of medical opinion upon one point, to wit: That malaria, whatever that may be, germ or what not, is the etiological factor in the production of the family of diseases to which this one belongs. Probably it would be well to state here that I am fully aware that a number of cases of hæmoglobinuria, some of which are paroxysmal in character, clearly not of malarial origin, are on record. Dr. Harley, of England, in his great work on "Diseases of the Liver," reports, in substance, the following case: The subject, a blacksmith by occupation, of stout, robust build, had never been out of London, never exposed, as far as could be ascertained, to malaria. When first seen by the doctor he had a dark, sallow, careworn complexion, with evidence of hepatic trouble, and was passing paroxysmally, bloody urine, corresponding with his chilly or cold sensation. He was treated with calomel and quinine, and made a good recovery. Among other causes assigned I notice rheumatism and the syphilitic virus.

That rare disease, acute icterous hæmoglobinuria of the newly born, or Winckle's Disease, has many points of resemblance to malarial hæmaturia. Notwithstanding these exceptional cases, I don't think they militate one particle against the fact that malaria is the materies morbi in this and kindred diseases. Observe, too, that Dr. George Harley's case yielded nicely to the calomel and quinine treatment.

It seems that most writers claim this disease to be of recent origin. Can this be true? I think not, and for the following reasons: First, it seems to me that it is the literature of the subject that is modern, and not the disease. This affection is met with almost exclusively in rural and insalubrious districts. Now, it is a well-known fact that medical literature has been but little shaped by the profession of these sections—little now, and far less in the past. Second, if this morbific principle which we call malaria is generated by decaying vegetable matter, under telluric and atmospheric influences, then, I take it, that these influences have been operating from the remotest antiquity. If, as we are taught, these influences are especially active in the production of this miasm in the spring and autumn months, (more especially the latter), then it is reasonable to infer that such disease must have existed from time immemorial. It is truly gratifying to find that clear writer, fine thinker and practical physician, Dr. R. H. Day, of Baton Rouge, La., agreeing with me in the history of this disease. I know of no higher authority in this class of diseases. He has this to say: "In 1837 up to 1843, I encountered this disease every year in the bottomlands of the Wabash and White rivers in the States of Ilinois and Indiana, and from 1843 to 1846 in the White River bottom, in the State of Arkansas, and that the oldest citizens of those places at that time recognized this disease and spoke of it as their ancient and common enemy."

Its causation, or etiology, has been sufficiently given, in a general way, whilst discussing its history. It is clearly to me an hepato-renal malady, and that malarial toxæmia of considerable duration is the primary causative factor. How this subtle poison of malaria acts upon the economy bringing about this destruction of the blood we cannot learn positively, but that such destructive changes are wrought is too true, culminating at last in this form of the pernicious malarial fevers. The great Dr. Harley, in commenting on this disease, gives us this

* Read before the Lowndes Co. (Miss.) Medical Society, October 6th, 1891.

physiological and pathological speculation, which, to my mind, foreshadows a theory that gives us a rational explanation of the disorganization of the blood globules. Here is what he says: "I was particularly struck with the resemblance this urine bore to the urine I have occasionally seen dogs pass after I had injected either bile or bile acids in toxic doses under the skin of their backs. Their urine not only occasionally presented the same color, but contained lots of granular tube casts, and still further resembled this human urine in being coagulable by heat and nitric acid. All this leads me to the conclusion that the condition of the urine in cases of paroxysmal hepatic albuminuria is in great part due to the disorder of the biliary secretion brought about by the direct result of malaria acting upon the liver." Again, he says: "As bile acids have a powerful disintegrating effect on the cell-walls of the red blood-corpuscles, it has once or twice crossed my mind that this peculiar condition of the urine in paroxysmal hepatic hæmaturia may possibly be due to the abnormal quantity of bile acids in the circulation." Now, then, if it is true that the bile, in abnormal quantity in the blood is destructive, in a powerful degree, to the entirety of the red blood-globules, and if this bile and its acids are in abnormal abundance prior to and during the course of this disease, it is nothing but rational to accept this theory as explanatory of the dark, bloody urine, which alone is pathognomonic of this disease. Certain it is, in this disease, that the blood is surcharged with bile, and every tissue of every organ in the body is soddened with the same. And if this theory is not borne out by the clinical history of the disease, then our treatment, in part at least, can be naught but irrational and unscientific; for I have my first physician yet to see, or writer yet to find, who does not recommend a prompt and decided attack upon that gland by which the offending substance is both elaborated and excreted. Therefore, I accept the theory that the functions of the liver are the first to be involved by the poison of malaria. Does the pathological aspect of the disease sustain this theory? Seemingly, yes. The liver is first congested and enlarged, with cessation, more or less complete, of its functions of bile formation and elimination. Consequently, the bile and its acids come in contact with and act upon the walls of the red blood corpuscles, causing them to break down. Intense jaundice soon follows. The nervous system is profoundly affected by the bile and its acids and other poisonous products of blood disintegration, since the functions of that great depurative organ are nil or nearly so. These poisons are hourly, yea, momentarily in transit through the kidneys, causing intense congestion and grave lesions in these important organs, culminating in their break down and the attending outflow of black, bloody urine. According to Dr. Joseph Jones, of New Orleans, "the colored blood corpuscles are more uniformly and rapidly destroyed in severe cases of malarial fever than in any other disease, with the exception perhaps of pyæmia. Authors state that the more severe and malignant the case, the fewer intact red blood-globules are found in the urine. This is confirmed by the analyses of urines made by those two eminent microscopists, Drs. Sternberg, of the U. S. Army, and Tyson, of Philadelphia. This statement of clinical facts, and analyses, strengthens the hepato-renal theory of the disease.

What of the diagnosis? The physiognomy of this disease is so striking that I will only touch upon its diagnosis by differentiating it from two or three other diseases. It would be well to state here, however, that there are two types of this malady. One, assuming the form of continued or bilious remittent fever; the other, markedly intermittent in its nature. Bilious remittent fever is stated to have a sort of family resemblance to this for graver affection. Jaundice, slight in the former, and develops slowly; intense in the latter, and sudden in its onset. Nausea and vomiting, a distressing symptom of the latter; not always present in the former, and when present not nearly so distressing. The nerve centres are not as profoundly affected in the former as in the latter. The urine may be high colored in the former; in the latter, it is always very dark, sometimes black. The urine of the former, while it is high colored and scanty from the fever, yet these features come on rather gradually, and there is no suppression; in the latter, the urine is black or dark from the start, loaded with the debris of disorganized blood-discs, and with a tendency always to suppression.

Yellow fever has many symptoms in common with malarial hæmaturia. In fact, some members of the profession regard the two as different types of the same disease. I was told only a year or two since by a physician (and he was far above the average medical man in intellectual power and medical training), that he regarded yellow fever and malarial hæmaturia as one and the same disease. As he expressed it, it was simply

the yellow fever of the interior. He was a man, too, with much experience in this disease. Authors tell us that yellow fever is an acute infectious disease, occurring only south of 48° north latitude, in regions having a mean annual temperature of not less than 70° Fahr. When the germs of yellow fever are imported into a region of country, if the telluric atmospheric and sanitary conditions are suitable, it at once becomes contagious. This far from the case with the malarial disease. The former is confined mainly to the sea coast, and the denser the population the more intense and virulent the poison; the latter is found in the interior, where the land is low and marshy, and is but seldom if ever seen in populous cities. Both of these affections are ushered in by a chill. The icteroid hue of the skin is not as sudden in its onset in yellow fever as it is in the malarial affection. The dark, bloody urine of yellow fever is a rather late symptom; in malarial hæmaturia it comes on with the chill. Black vomit is characteristic of yellow fever; not very often met with in the malarial trouble. Slight cold, such as frosty mornings soon puts a stop to the ravages of yellow fever—I treated a case of hæmorrhagic malarial fever in the month of February, while the ground was covered with snow. The former attacks the robust as well as the weak; the victims of the latter are those whose systems are undermined and enfeebled by chronic malarial poisoning. It seems to me that acute malarial jaundice comes nearer wearing the habiliments of malarial hæmaturia than any other disease. And, in truth, they are closely allied, springing from the same parent stock, malaria. In both you meet the deep yellow skin and conjunctivæ. In both you meet that intense nausea and vomiting and loathing of food. Fever in both, not so high, however, in the jaundice. Enlarged and congested liver and spleen, with tenderness, and constipation and clay colored stools in both. Dark and bloody urine in the one; and dark (though not so dark) and bile stained urine in the other. This aggregation of symptoms corresponds closely to the cases of acute malarial jaundice coming under my observation. In fact, I have endeavored to portray the malady as met with in my own person. I have often thought how close I was at that time to malarial hæmaturia; for, in my mind, there is but a step from the jaundiced to the hæmaturic variety of this toxæmia. I have often thought that the difference consisted in something like this: The liver though much disordered still eliminates a sufficiency of its biliary products to prevent immediate destruction of the red blood-discs, thereby saving the kidneys from sudden shock, congestion and the overloading of their vessels and excretory ducts with these effete and poisonous products of blood disintegration, allowing them time to take upon themselves the vicarous action of excreting bile, by which they, in their turn, rescue the liver from a total suppression of its functions. In other words, the pathological steps in the two diseases are nearly the same, with the difference that the one moves with the gathered force of the destructive cyclone, while the other moves with only that of the severe gale.

Before coming to the prognosis and treatment I would like briefly to mention two peculiarities of this affection: First, writers and observers of most experience tell us that this disease is never met with in the person of the negro. Why this racial immunity I wot not, nor do these writers, as far as I have seen, venture to tell us. It is an undisputed fact that the African race is not so prone to poludal affections generally as white men, and when encountered in this people they are more benign and tractable to treatment. There is a scope of country, of considerable area, east of us, where no white man dare attempt to live; yet here the negro, the owl, the tadpole and the mosquito "flourish like the green bay tree." As the original habitat of the negro is the jungles of tropical Africa, I take it that an All Wise Creator has given him an organism that is equal to the task of withstanding the ravages of swamp miasm. However, this might more properly be called a peculiarity of this race, and not one of the disease. In the second place, how often it is that we see a man residing in a malarious section escaping the poison, or, if not escaping, having it in some of its mild or masked forms. Now let him leave for healthier climes, and he is soon stricken with this or one of the other malignant forms of this many sided disease. I have in my mind's eye now two instances of this kind that went from my own neighborhood. One of these was a youth who had had no malarial outbreak for probably a year prior to his departure for a region where malarial troubles were certainly not of common occurrence. While he had had no active manifestation of malarial poisoning, yet the unmistakable cachexia was but too plain. The other, a young man of good constitution, had suffered from one or two spells of a mild form of intermittent fever, tertian in type, just

previous to his departure for the Gulf Coast of Mississippi, where such a thing as malarial hæmaturia is unknown. Such occurrences as these are common and striking. These two cases were of the most malignant type, and death was the immediate result. How is it that these organisms of ours can hold up and succeed in throwing off the poison, though exposed to its insidious invasion each moment of our existence, and, yet, when we reach a section where malaria is not a disease producing factor, an outburst of this fearful disease is upon us? Probably it may be explained by the total change of environment, body habit, and all influences tending to depress mentally. This change may produce a lowering of the vital forces, and a depression of the functions of the organs of secretion and excretion. This lowered state may be but transitory, yet sufficiently long for the poison that is stored up in the body to gain the mastery over that equipoise of our physiological state, known as health. This view, at least, furnishes me with a rational explanation of the cause in the two cases coming under my immediate observation. While at home they had both led active lives, passing a large part of the time in the open air. After their change of residence the reverse of this was true,—one of them entering the schoolroom, and the other, a mercantile establishment.

The prognosis in this disease is, indeed, grave. The death-rate, according to different writers, ranges from twenty to as high as sixty per cent. Candor compels me to admit that the mortality in my own cases, only six in number, amounted to fifty per cent. It is some consolation to me, however, to know that my cases were of the most malignant type of the disease, with the exception of one case, and, strange as it may seem, this one is on the debit side of my experience. This case impressed me from the start as mild, if any of them are ever mild. The subject was a female, about sixty years of age. She had suffered for years from that form of malarial poisoning known to the laity as sun-pain or brow ague, and to the profession as supra-orbital neuralgia. For about a week before the hæmorrhagic spell she had suffered—something very unusual for her—with a mild form of intermittent fever. Had taken a purgative, but had taken no quinine to arrest the chills, except one or possibly two doses the day I was sent for. She had just gotten up from the dinner table, where she had eaten a large quantity of boiled cabbage, when the hæmorrhagic chill came on. Reaction had set in when I reached her, but the fever was not very high. The icteroid hue was just beginning to diffuse itself over the body, but it was not at any time, except twenty-four or thirty-six hours before her death, intense. There was nausea, but no vomiting, for the first twenty-four hours, and after that only an occasional spell of vomiting. The urine could not be called black, but it had a dark smoky appearance, and was a little more than normal in quantity at first, after which it very gradually lessened each day. The pyrexia and apyrexia were as well marked in this case as they are in any ordinary intermittent. The urine would begin to darken in color with the beginning of the pyrexia, and would continue so for six or eight hours, then, simultaneous with the apyrexia, it would begin to clear up, and in the course of six or eight hours more would be almost normal in color. Regularly each day at about twelve o'clock this exacerbation of fever and darkening of the urine would begin, and for six days, the woman dying on the morning of the seventh day—this was the picture. I think I had a right, with this group of symptoms, to regard this case as mild. One other of my fatal cases was a relapse, suppression of urine beginning shortly after the initial chill of the relapse. This patient, a woman of forty or forty-five years of age, had so far recovered from the first seizure that she could walk about her yard.

Now, as to the treatment. If you have followed me in my notion of the pathology of this disease, you know pretty well before hand, about the line of treatment adopted. I will recite the treatment pursued in the above mentioned mild case, as it was and is my general plan of treatment, varied, of course, to meet special symptoms as they may arise: I used a large blister, reaching from the liver and extending across the stomach to the spleen. Gave five grs. of calomel, with two or three grs. of bicarbonate of soda, every two hours until fifteen grs. of calomel had been given. Two hours after giving the last dose of calomel and soda I gave a large enema of warm water. Bowels acted well, large and greenish stools. Began quinine just as soon as bowels began to move, five grs. every two hours, and succeeded in getting thirty grs. in her before the twelve o'clock pyrexia. I gradually increased the quinine each day, until the fourth day she was getting as much as fifty grs. Notwithstanding this heavy dosing of quinine the

pyrexia and darkening of the urine would come on at the usual hour, or a little before. I used fomentations over the region of the kidneys, lightly sprinkled with turpentine and heavily sprinkled with tr. of digitalis, and gave the latter drug in five drop doses every three or four hours. I did not resort to quinine hypodermically in this case, because the stomach bore it very well. I know that the practice of giving morphine, and even quinine for that matter, is a mooted question in this disease. But, right here, let me say, that my patients who got no morphine have gone from hence, and those to whom it was administered are with us still. Mark me, I claim no curative power for this drug, in this disease; but I do claim that an hypodermic of one-eighth or one-sixth gr. of morphine is the most effectual treatment at our command for allaying nausea and vomiting, and for quieting that intense nervousness always met with in this disease. I further know that after using quinine for four days in the case just outlined, I then began some other plan of treatment (I do not remember the exact treatment now, though muriate tr. of iron and chlorate of potash were two of the medicines freely used), and at once my patient began to grow worse. Every time I think of that case I can but regret that I quit the quinine instead of pushing it still further; for, while it did not arrest the disease, it was evidently holding it in abeyance. This will be my general plan of treatment in the future as it has been in the past. Not that I can claim any brilliant results for it in my hands, but certainly it is rational, and others report results equal to any other plan of treatment and probably better.

UTERINE TREATMENT DURING GESTATION. *

BY J. E. GILCREEST, M. D.,

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I shall notice *first*, the class of cases that we are called upon to treat, which need little or no treatment; and, *second*, the class that is needing treatment for various pathological conditions; then, I will report a few cases illustrative of each class.

I am aware that physicians differ widely on this very important subject. Some authorities say that all treatment is useless, and often hurtful; while others advocate all kinds of treatment, even for lacerated cervix, removal of ovarian tumors, fibromas and various other operations. I think much conservatism should be used in the treatment of diseases during pregnancy.

Turning now to the first class mentioned, namely, those that need little or no treatment, we find ourselves often consulted in regard to amenorrhœa, or as the patients often express it: "I have taken cold, and am suffering a great deal with my womb, and want you to do something for me to bring me all right. I know that is all the trouble." And when we suggest that the cause of the menses stopping is very likely a physiological one, they will protest and say they do not believe it possible, and insist upon something being done for them.

Of course, they are often sincere in their declarations. Some are so opposed to bearing a child, that when they think there is any chance of conception having taken place, they become almost desperate, and if they think they can get rid of it by deceiving us they will do so. Whenever we are called or consulted by a married lady who has missed her regular menstual period for one or two weeks, we should always be suspicious, and if we think there is the slightest probability of conception, then we should be very guarded in our examination, and should avoid the use of probes, sounds, and all rough manipulations.

If the patient is suffering and any treatment is indicated, give it, but cautiously. Many such cases will not want any treatment after they find you will not bring on their menses.

Case I.—I was called in May, 1886, to see Mrs. E., aged 30 years, mother of one child, four years old. She had been irregular for the past three years, suffering from backache, leucorrhœa, etc. They desired an examination, and something done. On examination I found the uterus slightly swollen, and I thought anteflexed; they told me it had been about five weeks since her menses, but assured me that was nothing unusual, as she had often gone five and six weeks.

My experience at that time had been limited almost entirely to what I had seen and examined in the Hospitals. I wanted to make a very thorough and scientific examination. Going through the different methods as laid down by Thomas for examinations for displacements, I came to the use of the sound. I then determined to see by the use of the sound to what degree the uterus was

* Read before a recent meeting of the North Texas Medical Association.

anteflexed, so I gave the sound what I thought the necessary curve and passed it. It indicated slight anteflexion; but was that all? No, I made my application and went home, but was soon called back in haste by a message that she was "flooding to death." I hurried back feeling that I had committed an unpardonable blunder, and that if my patient died I would be ruined.

I suppose she had an abortion, although I never saw any secundines or embryo. I called in an older physician, and we had much trouble in controlling the hæmorrhage. Her condition was alarming several times. I have always been very careful about passing the sound since then. This was entirely accidental on the patient's part, as well as my own. She had not intended to deceive us, nevertheless she did. I could enumerate a number of cases since that time that applied for treatment after conception had taken place, and by assuring them that it would be best to wait awhile, they would not return, but go on to full term. As I have said, I think this class of cases had better be left to nature as much as possible. We will now consider some of the conditions that do demand treatment, and I will cite a few illustrative cases.

One of the principal things calling for treatment in early pregnancy is the different displacements—and the retro-displacements stand first in importance, as they are the most common. All displacements bring about many and severe symptoms during gestation, such as vesical and rectal tenesmus, obstinate constipation, retention or incontinence of urine, often painful in various degrees; but the most frequent symptoms we are called upon to treat are nausea and vomiting. We should always look to the uterus as the cause, and endeavor to correct any pathological condition we find, as far as possible, no matter of what nature. Displacements, ulcerations, erosion, or specific diseases. Specific diseases require specific treatment. We should resort to local applications, such as are best suited to each case, with mercurial inunctions; paying attention to diet, hygienic surroundings, etc.

I will bring out the treatment I have adopted in the following cases, which have all come under my observation in the last three years.

Case II.—I was called to see Mrs. L., mother of two children. She had had no unusual trouble in her first pregnancy. She was then about the third month, had been suffering quite severely for the past month, and had been confined to her bed two weeks, and during that time had not retained anything on her stomach but a few minutes; she had not slept for a week except a few minutes when under hypodermics of morphine. She had been attended by a physicin before I was called, who had given her nearly everything in the catalogue of remedies, all of which had failed to do any good whatever, except the hypodermics which would produce a little ease. When I first saw her, she was almost in a state of collapse, pulse 140, skin clammy, trying to vomit every few minutes and begging for relief.

On vaginal examination, I found the impregnated uterus retroverted and incarcerated. The os under the pubes large and patulous to the touch. I had her take the knee-chest position and made several attempts before reducing the displacement, and finally succeeded with two fingers in the rectum. After dislodging the os and bringing it down, I introduced Sim's speculum to see the condition of the os—it was much swollen and eroded, and would bleed from the slightest touch. I made an application of argentum nitras gr. xl to ℥j, dusted the os with iodoform and used a dry tampon of wool, filling the vagina quite full. She was suffering from retention of urine, which was first relieved by soft catheter.

She rested much better for the next thirty-six hours, vomited but a few times, and would sleep two or three hours at a time. The nausea then commenced to increase, the tampon was removed and a thorough application of the argentum nitras applied, dusted the os with iodoform and tampon re-applied. She complained of a metallic taste in her mouth in a few minutes after the application. The relief was more marked. She gained strength and felt much better. The applications were kept up every second or third day for four weeks. The nausea would begin to return if the applications were left off too long. As the os became healthy she could do longer without the local treatment, till it was finally left off altogether. After the fourth month she went on to full term without any bad symptoms, and gave birth to a boy and girl, both healthy, well developed babies.

Case III.—I was called to see Mrs. B., primipara, in consultation. She had been vomiting every hour or two and suffering with continued nausea for about two weeks. She was supposed to be about in the ninth week of pregnancy; she looked thin, with eyes sunken. I was informed that she had

not slept over one hour at a time (and that was from large hypodermic doses of chloral) and that every ordinary remedy had been used without relief. She first refused to undergo any uterine examination; but the next morning she consented to have anything done that offered a hope of relief.

On examination we found the uterus prolapsed slightly, os swollen and very much eroded. We made an application of argentum nitras, and applied a wool tampon to elevate the uterus. The first application relieved her, so that she got several hours sleep without the aid of an anodyne. Her attending physician kept up these applications for two weeks, and she improved rapidly and went to full term without further trouble.

Case IV.—I was called sixteen miles from town to see Mrs. H., who was three months advanced in pregnancy. She had been suffering with severe nausea for four weeks, had not been able to retain anything on her stomach for the past ten days without suffering distressing nausea, till finally she would vomit and be partially relieved, but it would soon return and prevent her from resting or sleeping. I had been prescribing for two weeks before I saw her, and had given her nearly all the usual remedies at different times without any permanent effect. I gave her at once a hypodermic, as she was suffering very much. I made an examination and and found the os swollen, red and puffy, and the cervix very much granulated.

I thought as I could not see her again very well, I would make a thorough application, so I applied equal parts of tincture iodine and carbolic acid well up in the cervix and around it, used the wool tampon with iodoform, directed it to be worn two days, and then to use a wash of biborate of soda ʒij and tannic acid ʒss to a pint of hot water. She rested quite well that day and was better from that time on, although she suffered some for the next six weeks. I believe had I repeated the application every three or four days for awhile, she would have suffered but little more.

Case V.—I was consulted about Mrs. W., mother of five children, she had not menstruated for nearly nine weeks, but had been irregular for the past four years; youngest child five years old. She was suffering from continual nausea and vomiting. She and her husband were in doubt about her condition, as she had been suffering a great deal with her stomach the past four years, and had always suffered during her previous pregnancies. I prescribed for her over a week without any benefit. I then examined the uterus and found it considerably prolapsed, the os badly excoriated, looking very much like coxcomb ulcers. The cervix would admit the end of the finger, and this ulcerated condition extended up the cervical canal for three-fourths of an inch, and cleansing with cotton would cause blood to ooze freely from the parts. I commenced the treatment by using applications of pure carbolic acid, touching the diseased surface lightly, then dusting with a powder composed of three parts of iodoform, two of bismuth, and one of tannic acid, and placing a large tampon of wool under it to relieve the prolapsus.

There was a perceptible change after the first application, which was repeated every third day. Her stomach began to retain food and she would rest several hours with comfort. She would remove the wool the second night and use a wash night and morning. We soon noticed she would feel much worse on the third day, while going without support, so I made the application every second day for awhile, which made her much more comfortable. There was no change in the breasts or color of the vaginal surface to indicate pregnancy. The uterus was enlarged sufficient for the eighth week, so I went on with the treatment, in doubt, for three weeks. Then, by a careful comparison with the size now and when treatment was begun, I felt safe in telling her that she was pregnant. Treatment was continued for five weeks altogether. I made the application from three to four days apart toward the last. The excoriations of the os yielded nicely, and it looked quite smooth and well at the end of the five weeks. The applications, were, after the third, made with two parts tincture iodine to one of carbolic acid one time, and the next time with nitrate silver gr. xl to ʒj. She complained several times of a metallic taste in her mouth after the silver applications. She is now in her eighth month of pregnancy and has felt much better after the fourth month than she ever did in any previous pregnancy. Before, she had vomited every day, all the term; but now, has not been troubled with nausea for three months.

Antidote to Morphine.—The fatal effects of morphine may be counteracted, according to Kossa, by the joint administration of picrotoxin and paraldehyde in small doses. The paralyzing effect of picrotoxin on the respiratory muscles is obviated by the paraldehyde.

NECROSIS OF THE FEMUR, OF 29 YEARS DURATION.

(Service of De Forest Willard, M. D.)

BY HOWARD S. ANDERS, M. D.,

LATE RESIDENT PHYSICIAN, PRESBYTERIAN HOSPITAL, PHILADELPHIA.

The following case is of interest chiefly as an illustration of the wonderful reparative powers of nature, as seen in the long struggle of 29 years in an attempt to rid herself of dead material. It shows, moreover, how necessary is the surgeon's skill to assist in the removal of large masses of bone, which nature can extrude only by the tedious process of liquefaction.

W. S. H., aged 45, white, single, without vocation, able to walk with a cane—not easily, however—was admitted into the men's surgical ward. The following history was elicited: In 1862, without known injury or prior disease, the patient first noticed a small swelling, purplish in tint and very painful, on the outer middle aspect of the left thigh. Extensive osteitis resulted, with burrowing of pus in all directions, so that small discharging sinuses opened in "twenty-five or thirty" places on the leg, above and below the knee. He was prostrated in bed for one year, in consequence. At various times pus was liberated from the thigh by frequent incisions. In 1863, the left knee became painful, red and swollen; the pain growing worse at night. Contraction of the "ham-string" tendons followed, and impeded motion in the joint progressively increased until admission into the Presbyterian Hospital, when only very slight flexion and extension was possible.

Upon examination, there were observed old linear cicatrices about the middle of both the inner and outer aspects of the diseased thigh; several discharging sinuses on the inner, and one on the outer side, in the scar-lines. The probe gave undoubted signs of loose sequestra in the lower portion of the femur. Although the man was rather thin and somewhat pale and weak, his general health was—in spite of the inveteracy of his necrosis—quite fair; his physical characteristics were those of the motive temperament.

Three days after patient's admission, Dr. Willard performed sequestrotomy. The incision was about four inches long, a little external to the line of the femoral vessels, in the lower third of the thigh. A cloaca was enlarged, with a chisel, sufficiently to admit the blades of a Liston's forceps, and a very large sequestrum discovered. The thick, dense involucrum was partially chiselled away, and six inches of the condyles and lower portions of the shaft were found entirely dead,—and were removed; the sequestrum consisted of the entire lower portion of the bone. The bone cavity and the sinuses were curetted, douched and packed with aristolized gauze; a large calibered drainage-tube was inserted from within to an external counter-opening. The knee-joint was not involved by the necrotic process.

The patient rallied well from the immediate effects of the operation; but, about six hours afterward, inspection of the dressings showed that considerable bloody oozing had saturated them. Recurrent hæmorrhage having been suspected, the resident removed the dressings and applied fresh antiseptic gauze with close packing and firm pressure. No pain was complained of; but the pulse was very weak, small and rapid. Faintness, pallor and nausea lasted for awhile, but passed off under active stimulation and the frequent administration of nourishment.

Drainage was effectual; and the wound did well and was kept packed and made to close by granulation. Convalescence was entirely satisfactory.

Society Reports.

MISSISSIPPI VALLEY MEDICAL ASSOCIATION.

SEVENTEENTH ANNUAL MEETING, HELD IN ST. LOUIS, MISSOURI, OCTOBER 14TH, 15TH, AND 16TH, 1891.

FIRST DAY—MORNING SESSION.

The Association convened in the Pickwick Theatre, and was called to order at 10:30 A. M., by Dr. I. N. Love, Chairman of the Committee of Arrangements.

Prayer was offered by Bishop D. S. Tuttle.

The Address of Welcome was delivered by Hon. E. A. Noonan, Mayor of St. Louis, which was followed by addresses on the part of the State Medical Association, by Dr. W. B. Outten; the St. Louis Medical Society, by Dr. Ludwig Bremer, its President, and remarks by Drs. Harold N. Moyer and J. C. Culbertson, of Chicago.

After the report of the Chairman of the

Committee of Arrangements, which was an interesting and attractive one, Dr. C. H. Hughes, of St. Louis, took the chair and declared the Association ready for the transaction of its scientific work.

The first paper read was by Dr. W. Carroll Chapman, of Louisville, on "The Toxic Effect of Tobacco Vapor, With Report of Cases." (This paper was published in the REPORTER of October 24th, p. 653.)

FIRST DAY—AFTERNOON SESSION.

"The Treatment of Typhoid Fever." This was the title of a paper read by Dr. Robert C. Kenner, of Louisville, Ky., in which he directed particular attention to the cold bath treatment.

Dr. William Warren Potter, of Buffalo, followed with a paper entitled "Pelvic Inflammation in Women; a Pathological Study." The author affirmed that pelvic inflammations and their residues constitute about one-third of the diseases that gynæcologists treated, hence the importance of frequent discussions of all mooted questions relating to the subject. He briefly reviewed the anatomical relations of the pelvic organs, calling attention to their enormous blood and nerve supply, which became both their weakness and their strength. He contrasted the pathology of Bennet (1843) with that of Emmet (1873), and the latter with the teachings of Price, Tait, Hegar, and McMurtry of the present age. He referred to the pathological studies of Bermutz and Goupil of thirty years ago, and affirmed that the observations of the present had served to confirm the correctness of those pioneers.

He next asserted that the pathology of to-day had been established by operative surgery, which had shown that pelvic inflammation begins in the tubes or ovaries and extends to adjacent structures through absorption or by contiguity; that it almost never begins in the cellular tissue, but may be carried there through the tubes and ovaries by infections, either specific, puerperal, or traumatic. He affirmed that the inflammation was in most cases a peritonitis, intra-pelvic or local in character, and not a cellulitis; that para- and perimetritis were misleading and confusing terms, hence should be dropped; and that the so-called pelvic abscess was a sequence of salpingitis, ovaritis, or peritonitis, not a primitive accumulation in the areolar tissue itself.

The tentative management in these cases —rest, counter-irritation, hot sitz baths, vaginal douches, and attention to the digestive organs and general health—resulted in only temporary improvement, or in cure in a very small percentage. Those reported cured were generally, if the history could be known, subject to repeated relapses; and a frequently recurring pelvic peritonitis usually indicated leaky tubes. Electricity, too, had disappointed even its most sanguine advocate, and need not be considered.

In conclusion he asserted that if the views be accepted the logical deduction was to watch the early manifestations of the disease carefully, that competent surgical skill be invoked before the damage to important structures becomes too great to justify the expectation of successful operation.

Dr. Geo. F. Hulbert, of St. Louis, read a paper on "The Nervous Equation of Pelvic Inflammation."

Dr. L. T. Riesmeyer of the same city, contributed a paper entitled "Pathology and Surgical Treatment of the So-called Strumous Inguinal Lymphadenitis.

SECOND DAY—MORNING SESSION.

The Association was called to order by President Hughes at 10 A. M.

Prayer was offered by Rev. S. J. Niccols, of St. Louis.

Dr. Rufus B. Hall, of Cincinnati, Ohio, read a paper on "Complications During and Following Abdominal Operations."

Dr. Arch Dixon, of Henderson, Kentucky, followed with a paper entitled "Gastrostomy for Impermeable Stricture of the Cardiac End of the Oesophagus; Recovery; Subsequent Dilatation of the Stricture." On July 14th, of the present year, Dr. Thomas W. Taylor consulted him in regard to a patient who was unable to swallow anything save liquid. The patient, Captain S., aged 54, weight previous to difficulty in swallowing, 230 pounds, at the time of examination 156 pounds. Examination by means of œsophageal bougie (smallest size) revealed the fact that complete stenosis of the œsophagus existed at the cardiac end. Repeated trials failed to pass the stricture and the patient was informed that only an operation, the nature of which was explained to him, could prevent his death from starvation. Operation was declined. Again on July 29th, the patient consulted him and after persistent effort he failed to pass the stricture with the smallest bougie. He was requested by the author to go before the Henderson County Medical Society, which held a meeting that afternoon and be examined. To this the patient consented and

again an attempt was made to pass the stricture by a number of physicians present, without success. A statement of the case was made by Dr. Dixon and the unanimous opinion was expressed to the patient that only an operation could save his life. The patient had by this time grown much weaker and was reduced in flesh to 140 pounds. The operation was now consented to and on August 4th, at the Home Mission Sanitarium, assisted by Drs. John Young Brown, W. M. Hanna, W. S. Stone, A. J. Lieber, and T. W. Taylor, Dr. Dixon did a gastrostomy after Hacker's method, as follows:

The patient was prepared in the usual way, the field of operation being made as nearly aseptic as possible. Chloroform was administered by Dr. T. W. Taylor. The incision was made four inches long, beginning one inch below the ensiform cartilage and an inch and a half to the left of the median line; the peritoneum was reached, caught up between forceps and divided the full length of the incision. The index and the middle fingers were inserted, the transverse colon pushed downward and the stomach reached without difficulty; a fold was caught between the fingers and partially drawn through the wound, where it was held by Dr. Brown, while a careful search was made for the cardiac end and to detect, if possible, any tumor or enlargement which might be the cause of the stricture; none could be discovered. A silver pin was now passed through the fold of the stomach, which was drawn through the wound, a little above the level of the skin, care being taken that the pin pierced the mucous membrane, as suggested by Weir, thus forming a support for the stomach in the wound and serving as a guide when the opening should be made into it to show that the cavity was reached. The pin was about three inches long and rested on the skin on either side of the wound; the peritoneal coat of the stomach was now stitched to the peritoneum by a continuous suture which on either side of the wound included the skin. The peritoneum above and below was brought together by interrupted sutures, which embraced muscle, fascia and skin as well.

The wound was now covered with iodoform collodion over which iodoform gauze was placed, confined by adhesive strips. The opening into the stomach was purposely deferred until adhesions should have formed. The patient recovered from the effects of the anæsthetic well. There was some pain of a darting character, which was relieved by hypodermic injection of morphia ¼ gr., and atropia $\frac{1}{150}$. The operation was finished at 11 A. M. At 6 P. M. temperature was 99°; pulse 78. August 5th, temperature 98½°; pulse 72. Temperature and pulse remained normal until the morning of August 7th, when the dressing was removed.

A few drops of cocaine were injected into the fold of the stomach which protruded through the wound and the gastrostomy was completed by cutting down upon the pin with a tenotome. As in Weir's case, the presence of the pin was a valuable guide in showing beyond question that the cavity of the stomach had been entered. There was no hæmorrhage of moment. The adhesions being firm, the pin was withdrawn and the mucous membrane was drawn up and stitched to the skin. A rubber tube was now passed into the stomach through the opening fitting it snugly. Iodoform collodion was liberally used around the tube and over the abdominal wound. Iodoform gauze folded several times, through which a hole was cut for the tube, came next, covered by a piece of rubber sheeting. Borated cotton held in place by adhesive strips completed the dressing. The tube was kept *in situ* by a thread passed through it above and below, and the thread held in place by adhesive strips. Peptonized milk, ½ pint with a teaspoonful of Mosquera's beef-meal was now injected through the tube into the stomach by means of a large syringe. An ordinary spring clothes pin was used as a clamp for the tube. Six hours later another one-half pint of milk with the beef-meal was thrown into the stomach, the patient experiencing a satisfaction which had not been experienced previously from the use of nutritive enemas. Temperature at 8 P. M. reached 101°. At 10 A. M., August 8th, it had again fallen to normal. The feeding was continued at intervals of six hours, the food being varied in character; chopped meat, eggs, bread, etc., the patient having an aversion to brandy, and would take no stimulant of any character. Improvement was steady and in ten days the patient was out of bed. In two weeks he was walking about the house, and in three weeks was down in the city, a distance of one-half mile from the Sanitarium.

On the 28th day of August, twenty-four days after the primary operation, and twenty-one days after the stomach was opened, Dr. Dixon determined to try dilatation, and was agreeably suprised to find that the smallest size, olive-pointed bougie entered the stomach, passing the stricture without difficulty;

a size larger was now used and it passed also without force.

The following day a large stomach tube was passed down the œsophagus and with little difficulty entered the stomach. Dilatation was continued at intervals of a few days. From liquid food the patient soon essayed some solid food, and on September 10th took his first square meal, which consisted of oysters, broiled beefsteak, coffee, eggs and bread. The patient left the Sanitarium, and he was thinking seriously of closing the abdominal opening, or allowing it to close. On September 23rd, the patient, who made daily visits to his office, complained again of difficulty in swallowing solid food; especially was there difficulty in swallowing bread. The bougies passed the stricture easily on entrance, but on withdrawal there was a decided hitch; even the smallest bougie was caught slightly when withdrawn. Dr. Dixon at first attributed this to spasmodic action, but the difficulty grew greater and greater, until finally he could no longer enter the stomach by way of the œsophagus with a bougie. Liquids could still be allowed and found their way into the stomach. He now determined to try retrograde dilatation, and on September 30th, assisted by Dr. John Young Brown, he succeeded in finding the cardiac end of the œsophagus and entering it with a very small *bougie-a-boule.* The opening was about the size of a very small shirt buttonhole and felt much like the meatus urinarius in a girl; it was surrounded by a hard tissue, feeling much like a fibroid. A uterine sound was next properly bent and with the finger as a guide, passed into the œsophagus; this was followed by a uterine dilator; slight pressure on the handles opened the blades almost half an inch, but the patient experienced so much pain that it was deemed best to desist. The following day chloroform was administered and retrograde dilatation was accomplished, first by means of G. Wylie's uterine dilator, the use of which enabled him to enter the orifice with a large size bougie (rectal).

Up to this time he had not been able to determine whether the stricture was due to malignant trouble or not, but on passing the finger into the non-dilated œsophagus, a friable irregular growth was detected, which easily broke down and bled rather freely. A piece of this growth was twisted off by forceps and was sent to Formad, of Philadelphia, for examination. Since the dilatation the patient has been able to swallow solid food without much difficulty and has notably improved in flesh and strength, and is able to attend to some business.

The author wished to acknowledge his indebtedness to Dr. Robert F. Weir, of New York, for many valuable suggestions, both in the performance of the operation and in the management of the case afterward, gleaned from his report of a similar case published in the *Medical Record,* July 25, 1891.

Dr. Dixon also exhibited the patient to the Association.

Dr. L. Ch. Boisliniere, of St. Louis, exhibited a new obstetric forceps of his own design.

SECOND DAY—AFTERNOON SESSION.

Dr. J. W. Carhart, of Lampasas, Texas, contributed a paper on "The Influence of Grave-Yards on Public Health," in which he drew the following conclusions:

1. From whatever standpoint this subject is approached it must be with care and gentleness, since the grave-yard, though a constant menace to public health has a pseudo-sacredness fostered by the profoundest sentiments of our natures.

2. The method of the disposal of the dead should be founded on reason and not on custom or sentiment.

3. The interment of the dead in the earth was never enforced by a statue, Jewish or Christian, and was merely incidental to both dispensations.

4. No law, human or divine, requires us to dispose of the dead in a manner prejudicial to the health and comfort of the living.

5. Whilst it may be an open question as to the right of the state to decide as to the manner of the disposal of the dead, except in exceptional cases, it is clearly the province and duty of the state to prevent such disposal as will in any wise jeopardize the interests of the living.

6. From all the facts at our command, we are led to the conclusion that the grave-yard should become a thing of the past, and that incineration is the method most in accordance with science, sanitation, anæsthetics, reason and religion.

7. We would add, as a corollary to these several conclusions, that since the intelligent, broad-minded physician is the almost exclusive guardian of public health in seeking to prevent the development and spread of disease, it is plainly his duty, when cemeteries are being located, to use his best endeavors to have them so placed as to jeopardize as little as possible the public health; and for its moral effect he should encourage

efforts to beautify existing cemeteries; and that he should seek, as fast as possible, without too much violence to the tender sensibilities of the masses, to encourage incineration of the dead, or some other method more in harmony with sanitary science than the common modes now practiced.

Dr. J. T. Jelks, of Hot Springs, Ark., read a paper on "Blenorrhœa."

Dr. Landon Carter Gray, of New York, followed with a paper on "The Present Aspect of Cerebral Surgery," in which he epitomized the work of Horsley, Ferrier, Keen and others.

Dr. John A. Larrabee, of Louisville, Ky., read a paper entitled: "The Importance of Recognizing a Temporary Rachitic Condition in Infants."

Dr. F. C. Hoyt, of St. Joseph, Missouri, read a paper entitled "Pachymeningitis Hæmorrhagica Interna, with report of a case and Presentation of a Pathological Specimen," and suggested the following deductions, offering them as a practical and rational view of the subject:

1. That the disease known as pachymeningitis hæmorrhagica interna chronica, is not a disease of the dura mater primarily, and not necessarily at all. The name is, therefore, a misnomer, and the simpler term, sub-dural hæmatoma, should be substituted.

2. That the condition is due primarily to paralysis or loss of the normal vaso-motor tonus, associated with structural changes in the cerebral vessels, particularly those of the pia mater.

3. That hæmorrhage may, and often does, take place in the substance of the dura from the causes stated in the paper, but that its vascular supply and anatomical structure render it improbable that these hæmorrhages play any part in the formation of a sub-dural hæmatoma.

4. That the hæmorrhage occurs from the vessels of the pia mater primarily, forces its way without difficulty through the upper web-like layer formerly called the arachnoid, escaping into the sub-dural space. The extravasated blood becomes organized, new vessels are formed, and these assist in furnishing the recurrent hæmorrhages.

5. That the inflammation of the internal surface of the dura mater is secondary and due to the irritation of the extravasation, and then is not general, but occurs only in patches where organic union has taken place.

Dr. Seth S. Bishop, of Chicago, in a paper entitled "Camphor-Menthol in Catarrhal Diseases," reported a large number of cases of naso-pharyngeal catarrh, hay fever and diseases of the ear as having been treated with camphor-menthol with much better results than menthol alone produces. The presence of the camphor appears to intensify the action of menthol.

A number of hay fever sufferers, among them the President of the U. S. Hay Fever Association, have obtained greater relief from this inhalent than from any other they have ever tried. The effect of the camphor-menthol in reducing turgescence and consequent tumefaction of the turbinated bodies has rendered a contemplated operation for stenosis unnecessary in several cases cited.

Injections of a ten per cent. solution of lanolin into constricted Eustachian tubes have caused them to become patulous. The improved ventilation of the middle ear thus effected, together with inflation with a five or ten per cent. spray of the same liquid in hypertrophic tympanic catarrh increased the hearing and produced a sense of clearness and comfort in the head.

Cases of laryngitis with the voices reduced to a whisper were treated with inhalations varying from five to twenty per cent. in strength with the result of restoring the voices completely in from twenty-four to forty-eight hours.

No ill results have followed the use of this remedy in the nose, throat, larynx or middle ear. The ordinary strength of inhalations recommended by Dr. Bishop was three or five per cent. for very susceptible or sensitive individuals like hay fever patients, and ten per cent. for less nervous persons with hypertrophic catarrh, etc. In order to reduce great swelling of the turbinates and relieve stenosis, the solution should consist of twenty or twenty-five per cent. of the camphor-menthol.. The full strength of camphor-menthol applied to eczematous eruptions relieved the itching and dissipated the redness and swelling. Similar results followed its application to herpetic eruptions.

Finally, camphor-menthol contracts the capillary blood vessels of the mucous membrane, reduces swelling, relieves pain and fulness of the head, or stenosis, arrests sneezing, checks excessive discharges and corrects perverted secretions.

Dr. F. King, of New York, read a paper in which he advocated the poro-plastic felt jacket in the treatment of spinal troubles.

SECOND DAY—EVENING SESSION.

The Association was called to order at 8 P. M., by the Second Vice President, Dr. S. S. Thorn, of Toledo, Ohio, after which Pres-

ident Hughes delivered his address on "Medical Progress."

He reviewed the history and progress of medicine and surgery. He said it was gratifying to the humanitarian student of scientific medicine to note the amazing progress lately made in the knowledge of the human organism and in resources for its regulated control in health and disease. He referred to the wondrous laparotomies of Tait; the brilliant craniotomies of Victor Horsley; and the abdominal sections of Senn.

He also said the memory of Harvey, Jenner, Jackson, McDowell, and a host of others, is not yet fully appreciated by the world at large. But their deeds will shine brighter and brighter as the world comes to know them and fully realize as we do their incomparable benefactions, their unsurpassed greatness, and their unequalled heroism.

Dr. J. B. Hamilton, of Chicago, followed with an address on "The Drainage of Chicago," in which he principally dwelt upon its topography.

Dr. Joseph M. Mathews, of Louisville, delivered a timely, entertaining and remarkably humorous address on the "Lights and Shadows of a Doctor's Life." The address was punctuated throughout with great applause, and was a relief to the laity after listening to the profound, scientific, scholarly addresses of the preceding speakers.

At the close of the session the members repaired to the Lindell Hotel, where a banquet was given with all the manifestations of true St. Louis hospitality. Dr. I. N. Love acted as Toastmaster.

THIRD DAY—MORNING SESSION.

Mr. Charles Truax, of Chicago, read a paper (by invitation) entitled "Are Conservative Amputations always in the Interest of the Patient?" He said that during the past quarter of a century the development of prosthetical science has advanced with a rapidity unprecedented in the history of the art. The first of the two great causes which stimulated this development may be found in the dreadful carnage and mutilation observed in the late civil war, which left thousands of veterans maimed by the loss of one or more limbs, for whom it was necessary to provide artificial substitutes. Experience and investigation had convinced him that the percentage of favorable cases can be largely increased, provided surgeons will familiarize themselves with the necessary mechanism of ordinary artificial legs and the relations existing between them and the stumps on which they are to be worn and select their point of amputation accordingly.

From a statistical point of view he finds that out of 2,135 tibial amputations reported to him as being performed between the years 1885 and 1891, 90.7 per cent. resulted in healthy stumps; 3.1 per cent. of stumps upon which compensative appliances could not be worn. Of these tibial cases, 962 were seen by the surgeons after they were wearing, or had attempted to wear, an artificial limb, 86.9 per cent. of which walked with an easy movement and a comparatively graceful step. Of 658 tarsal and tibic-tarsal amputations reported at the same time, 62.7 per cent. resulted in sound, healthy stumps; 8.3 per cent. underwent re-amputation; while 3.2 per cent. died, leaving 14 per cent, including re-amputation upon which prosthetical apparatus could be worn. Of this class of cases, 169 seen after attempting the use of compensative appliances, 54.4 per cent. of which could walk well.

If we can judge from the foregoing statistics, in over 100 cases of each of these classes of operations, we may reasonably expect the death loss to be in favor of tarsal operations as 30 to 3.2 per cent.; while the ratio of re-amputations necessary will be in favor of tibial amputations, as 8.3 is to 3.1.

He recommended surgeons to avoid amputating within three inches of the knee-joint. Do not amputate between the metatarsal bones and the junction of the lower and middle thirds of the tibia. At all other points they should save all they could, and then they will have done, in every case, the best for their patients.

"Intestinal Obstruction."—This was the title of a paper read by Dr. Henry H. Mudd, of St. Louis, in which he advised early operation.

Dr. C. H. Dalton, of St. Louis, read a paper entitled "Temperature no Guide in Peritonitis." So skeptical had he become on the subject that in considering the advisability of an operation in abdominal cases, he was no longer guided by the thermometer. He takes the temperature in all cases, but does not let the lack of fever influence him against operation, when other symptoms, upon which he had learned to place far more reliance, would move him in the opposite direction. Surgeons found it difficult to convince the average physician that a violent peritonitis may exist without a normal or even subnormal temperature, for the teaching by some has heretofore been that sepsis is always accompanied by an elevated temperature.

Several weeks since he was called in con-

sultation in a case of intestinal obstruction in which peritonitis was in full blast. He advised operation and was met with the objection that there could not be much peritonitis with a temperature of 99.50. He pointed in vain to the patient's anxious countenance, to the great tenderness on pressure, a distended belly, the vomiting, the pulse, as well as to the fact that purgatives had been tried without avail. The doctor in attendance insisted upon one more dose of salts. It was given, it did not move the bowels, but it did move the patient to that place from whence no traveler returns. Time and again he had seen cases of intestinal obstruction with stercoraceous vomiting, rapid pulse, anxious countenance (facies abdominalis), in which the temperature was about normal or even subnormal.

In his earlier experience the lack of fever in abdominal cases puzzled him very much and led him astray in a number of instances. While it is well to remember that fever when present in belly cases indicates peritonitis, its absence does not warrant us in saying that peritonitis is not present, and should not blind us as to the actual condition.

"Sarcoma of the Dorso-Scapular Region." —Dr. Geo. N. Lowe, of Randall, Kansas, read a paper on this subject. He reported a case upon which he had operated, the patient, a man, aged 18 years, with no history of tuberculosis, carcinoma or sarcoma, recovering. The object of the paper was to show:

1. The necessity of an early operation in all cases of a malignant growth.

2. That some species of sarcoma are more rapid and destructive in their course than carcinoma, especially the spindle and giant-celled variety.

3. The necessity of having a law to enforce patients so afflicted, as soon as a correct diagnosis can be made, to an early operation, thereby preventing great suffering and prolonging life.

4. That in a sarcoma which has grown to an emormous extent, infiltrating the surround ing tissues at any considerable extent from the main growth with cell proliferation, an operation is almost useless as regards a permanent cure.

Dr. W. H. Linke, of Petersburg, Indiana, read a paper on "Appendicitis," and offered the following conclusions: In the commencement of the attack, give salines often and liberally till the gut is completely emptied. Advise perfect rest in bed. Forbid any but liquid nourishment. If pain is severe apply counter-irritation and dry heat till salines act. If patient improves, wait. If pulse grows worse, if temperature rises, if pain increases, if tumefaction becomes larger, if tenderness becomes more marked, operate. At no time, give morphine, but consider an increase of pain sufficient to demand relief by opium an imperative, unequivocal and emphatic indication for surgical interference.

"Rheumatism and Gout as Factors in the Causation of Eczema, and the Management of Those Conditions," was the title of a paper contributed by Dr. A. H. Ohmann-Dumesnil, of St. Louis. He did not purpose speaking of the etiology of eczema. The only phase which he desired to take under consideration was, in how far rheumatism and gout were concerned in the causation and prolongation of eczema, and what was the proper management of those conditions in order to derive the greatest benefit, so far as the cutaneous involvement is concerned. Naturally this implied that he was about to sustain the position that the conditions named were etiological factors, and such was probably the case. If we took the trouble to examine critically the history, condition, treatment and results in patients, a mass of evidence would be found, which, if it did not constitute absolute proof, bore so much weight with it that the probabilities would all tend to confirm and strengthen the position that rheumatism and gout prolong, intensify, and even cause eczema. He had found it to be quite frequent also to note the fact that an acid condition was present in eczematous patients. It occurred too frequently to be regarded as a coincidence. Moreover, a correction of this acid condition finds its good effects reflected in the ease with which the cutaneous trouble gave way to proper medication. Whether such cases were inclined to rheumatism or gout it was difficult to say; but that an excess of acid was found in all of these conditions there was no opportunity of denying. For, if eczematous patients were interrogated in this respect a large proportion of them would speak of acid eructations, pyrosis, and other evidences of the condition.

In regard to the management of gout and rheumatism, volumes had been written and equally good results had been claimed for different methods of treatment. The most powerful alkali to effect the solubility of uric acid was, beyond all doubt, lithia. The urates of the alkali are the most soluble known, and, on that account, a better elimination can be secured. Potash salts rank

next in value in regard to their solvent value upon uric acid. The soda salts, while exercising a good influence, are not as valuable in this respect as either of the others; and the magnesia salts are the least effective.

A question of no mean importance was that concerning the solubility of the various alkaline salts. Chemical investigation has clearly demonstrated that the bicarbonates of lithia, potash, and soda are not only the most soluble, but the most easily assimilated by the animal organism. To prevent any decomposition it is only necessary to dissolve them in carbonated water, which not only keeps them in a soluble state but also adds to their palatability.

Dr. Enno Sanders, of St. Louis, has prepared a well known lithia potash water, which fills all the indications required, and which acts not only as an anti-rheumatic, anti-lithic, and anti-gouty mixture, but constitutes a grateful table water as well. It not only acts as a curative remedy, but, what is of still greater importance, it is a reliable prophylactic. Its composition is as follows:

℞

Lithium bicarbonate	gr. xiij.
Magnesium bicarbonate	gr. x.
Potassium bicarbonate	gr. xvj.
Sodium chloride	gr. x.
Carbonated water	℥ xvj.

M. This quantity, one pint, should be taken daily, or the amount increased if deemed necessary.

Conditions occasionally arise in which it will be found that a mixture of salicylate of soda and bicarbonate of soda will effect the happiest results in rheumatism, and occasionally in gout. Given in carbonated water the administration is made pleasant, and the mixture has an effect upon the patient which is refreshing at the time it is taken, and which effects beneficial results in a very short time. When eczema is present the proper local remedies should be made, and it is astonishing how their action will be accentuated by the internal use of the alkalies as indicated above.

Dr. C. A. L. Reed, of Cincinnati, Ohio, read a paper entitled "Observations on the Management of Uterine Tumors", in which he said that there are certain solid tumors of the uterus that require no operation. They are for the most part comparatively small neoplosms, either interstitial or subserous; they are indolent in growth, and they do not produce alarming symptoms from either pressure or hæmorrhage. There are certain other myomata of the uterus that are uniformly recognized as demanding operation. They are for the most part rapidly growing tumors in young subjects, removable fibrocystic tumors; soft œdematous tumors; large bleeding fibroids, and those growths which give rise to ascitic accumulations.

Dr. Reed offered the following conclusions:

1. That all persistently hæmorrhagic uterine myomata of whatever variety should be advised to early operation.

2. In young subjects, with multi-nodular tumors giving rise to alarming hæmorrhage, the appendages should be removed when practicable as an alterative for extirpation. But the latter operation should be done whenever the character of the growth will permit of its removal by dangers less than those which would be involved by its continued existence.

3. To those tumors already recognized as demanding operation should be added those of uterine development that are liable to dangerous constriction by the uterine walls and in which their destruction by this means might induce sepsis.

4. All cases of subserous growth, indolent, yet progressive in character in which the tumor has become a menace to neighboring organs, should, whether hæmorrhagic or not, be advised to exploratory incision with reference (1) to removal of the appendages, or (2) of the neoplastic organ.

5. All growing tumors, in women beyond the menopause, should be removed, if possible, by vaginal total extirpation, or, if that be impracticable, by abdominal section.

6. All distinctly operable cases demanding interference should be advised to submit to operation at the earliest practicable moment.

"The Etiology and Treatment of Granular Conjunctivitis". This was the title of a paper contributed by Dr. Francis Dowling, of Cincinnati, Ohio.

Dr. Dowling stated that the great *role* which the disease plays in the causation of blindness, renders its successful treatment one of the great desiderata of our day. Its great hot-beds are in some of the countries of the Orient, owing to the prevalence of whirlwinds of sand, and the intense heat and glare of the sun. The malady attacks by preference the poorer classes; the rich and well fed enjoy a comparative immunity from the disease. It is most frequent in persons between the ages of 15 and 45; children under six rarely have the disease. It does not become epidemic at a height of over 250 metres above the sea level, and it loses its contagious character at this height. Low regions and swamps favor its spread. It is highly contagious; probably three-fifths of the blindness throughout the world are di-

rectly or indirectly due to this disease. There is often some special liability on the part of certain individuals to the contraction of the disease, owing to the presence of a special diathesis, or otherwise.

Treatment.—Personally he had more success by touching the lids with the mitigated stick of argentum nitras, and then immediately washing it off, than with any other remedy. He applies the treatment usually twice a week, and on the intervening days he rubs in an ointment composed of yellow oxide of mercury and atropine. He also corrects any trouble of refraction that may exist, for unless this is attended to, the disease will persist under all kinds of treatment.

The disease is now treated in Paris, France, by completely everting the lid, and scarifying the granular tissue, then rubbing in with a stiff brush a 1–500 solution of bichloride of mercury. Cases are cured in this way in four to six weeks, that formerly took several years to cure with the old treatment. In outbreaks of the disease in orphan asylums, barracks, etc., the afflicted should be completely isolated from the healthy inmates, and their apartments should be kept absolutely clean, and fumigated with burning sulphur at least once a week.

Dr. John Bartlet, of Chicago, presented a paper in the form of a review of an obstetrical work, published in Paris in 1682 by Paul Portal. He said the older members of the profession had for years rested in the opinion that it was Paul Portal to whom obstetrical science was indebted for the discovery of the fact, that in placenta prævia the after-burden was attached to the womb, and had not simply fallen down over it, as was taught by writers before his day.

Dr. G. Frank Lydston, of Chicago, followed with a paper entitled "Observations on Urethral Stricture," in which there were many striking original points. The author opposed the general impression prevalent among surgeons that the long duration rather than the severity of a virulent urethritis determined the development of organic stricture. He claimed that this view has been due to fallacious reasoning from the standard of *post hoc ergo propter hoc.* It is not the long continued urethritis that produces a deposition of the adventitious tissue constituting organic stricture. On the contrary, a chronic localized urethritis exists because the stricture, or the foundation of it has been determined at some portion of the urethra by the primary virulent inflammation. He claimed that the liability to the formation of organic stricture is directly proportionate to the severity of the primary inflammation. The localization of stricture, the author claimed, was not due as Sir Henry Thompson and his school assert, to an obstruction to drainage and the retention of the products of virulent inflammation, but to deficient elasticity or distensibility of the canal at certain points. The conditions determining stricture he compared to those prevailing in a rubber tube about which cords are tied in such a manner that while some actually constrict the tube, others simply prevent its distension. If fluid be pumped through a rubber tube thus constricted or restricted, as the case may be, at a certain degree hydrostatic pressure, and at certain intervals friction, occurs at these points and produces a continual unrest. The epithelium is rapidly removed, its vitality being impaired by the virulent poison of urethritis. By and by rapid removal and reformation of epithelium becomes a cell habit, the resulting formation of cells being of a low grade of inherent vitality. In addition to this change upon the surface of the mucous membrane there is deposited young connective tissue cells in and about the affected point as an evidence of an attempt on the part of nature to secure rest and prevent strain. These cells the author likened to sandbags thrown up to strengthen or prevent a breach, as the case may be, in a fortification.

The doctor called attention to a number of interesting reflex phenomena incidental to stricture of the urethra. He also went inexhaustively into the various toxæmic conditions incidental to renal disturbance secondary to stricture, and to that peculiar form of toxæmia incident to the absorption of ptomaines from the site of the urethral lesion. He went into the subject of electrolysis and absolutely denied the possibility within the limits of safety of using it in the treatment of organic stricture. Galvanism, he claimed, instead of electrolysis is what is really accomplished. He condemned the routine and extreme claims of Newman, and also the other extreme as represented by Dr. Keys, who asserts that galvanism, i. e., so-called electrolysis has absolutely no effect. Dr. Lydston claimed that the effect of galvanism upon organic stricture of the urethra was the same in its physiological character as upon healthy or morbid tissue in any other situation. The author described what he terms *plus* conditions of organic stricture. Thus we have engrafted upon the organic foundation varying degrees of hyperæmia, spasms, and œdema, one or all. These *plus* conditions the author claimed, galvanism, properly

applied, would subtract from the organic condition in certain cases, and in so far as this effect was marked the stricture would be benefited. The author denied the possibility of the galvanic current producing absorption of fibro-connective tissue after it had arrived at the acme of differentiation by any current which will not destroy the mucous membrane itself; in other words, we cannot control the galvanic current so that it will exert a selective action and remove the abnormal tissue while sparing the normal tissue.

The following officers were elected:

President—Dr. C. A. L. Reed, Cincinnati, Ohio.

First Vice-President—Dr. C. S. Bond, Richmond, Indiana.

Second Vice-President—Dr. Thomas Hunt Stucky, Louisville, Kentucky.

Secretary—Dr. E. S. McKee, Cincinnati, Ohio.

Chairman of the Committee of Arrangements—Dr. Joseph Ranshoff, Cincinnati, Ohio.

Place of next meeting, Cincinnati, October, 1892.

Selected Formulæ.

COCAINE AND ANTIPYRINE COMBINED AS A LOCAL ANÆSTHETIC.

Dr. D. Stuver (*Hygiea*, No. 3, 1891) praises a solution of five parts of cocaine and fifteen parts of antipyrine in one hundred parts of water as a very efficacious local anæsthetic for minor surgical operations. The action of this mixture he states to be more intense and longer lasting than that of cocaine alone. It has also been successfully employed in cases of obstinate vomiting.

FERRO-IODIZED CODLIVER OIL.

Ch. Diete gives the following in the *Chemische Zeitung:*

℞
Porphyrized iron..... grammes iv.
Iodine..... " 8.20.
Ether..... " lxx.

Mix and agitate until all the iron is converted into iodide. Then heat in a water-bath 200 gm. of codliver oil; add the etheric solution of iodide of iron and continue the heat until the ether is driven off. Let cool, and filter. This preparation should be preserved in small containers only.

THIERSCH'S ANTISEPTIC SOLUTION.

The extensive use of Thiersch's solution (named after a German surgeon) in many modern abnormal, intestinal and bladder operations, conducted in hospitals and frequently at the patient's residence, and in urethral and uterine irrigations performed at the surgeon's office, has induced Adolph Levy to recommend the combination of this solution (consisting of salicylic acid 3 parts, boracic acid 12 parts, in 1.000 parts of water), in form of compressed tablets each containing:

℞
Salicylic acid, resublimed.....gr. xiv.
Boracic acid (boric) resublimed.....gr. lxxxiv.
Compressed in form of tablets.

To each tablet is measured sufficient distilled hot water to measure one pint. The solution may be prepared as needed.

TYPHOID FEVER.

In an interesting article on this disease, I Burney Yeo quotes the following two prescriptions. Both have been thoroughly tested and highly recommended. The first is by Dr. Wilks:

℞
Sulphurous acid.....m xx.
Water.....f℥ j.
Syr. aurant. cort.....f℥ ij.
Sig. At a dose every four hours.

The following is given by Dr. H. C. Wood:

℞
Ol. caryophyli.....gtt. vj.
Ol. terebinthinæ.....f℥ jss.
Glycerini.
Mucil. acaciæ, aa .....f℥ ss.
Syr. et. aq. ad.....f℥ iij.
Sig. Dessertspoonful every two hours during the day, patient being allowed to rest at night.

Yeo has tested chlorine water and obtains excellent results. His prescription is as follows:

℞
Potas. chloratis.....gr. xxx.
Ac. hydrochlor. fort.....m xl.

Place in a 12-ounce bottle and cork. When filled with gas add water gradually and shake. Then add—

℞
Quin. sulph.....gr. xxiv--xxxvj.
Syr. aurant. cort.....℥j.
Sig. One ounce every two, three or four hours, according to the severity of the case.

—*Lancet*, April 11, 1891.

LOCAL ANÆSTHESIA MIXTURE FOR SMALL OPERATIONS.

Dobisch, (*La Rassegna di Scienze Mediche*, No. 2, 1891) used the following mixture as a spray to produce local anæsthesia for minor operations:

℞
Menthol.....parts 1.
Sulphuric ether..... " 15.
Chloroform..... " 100.

Anæsthesia is complete, profound, and lasts two to six minutes.

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The Editor will be pleased to get medical news, but it is important that brevity and actual interest shall characterize communications intended for publication.

LEADING ARTICLE.

THE ETIOLOGY AND TREATMENT OF PUERPERAL ECLAMPSIA.

There is no acute disease which should demand greater consideration, as regards pathology and treatment, than puerperal eclampsia. In support of this assertion it is only necessary to refer to the high mortality (both to mother and child), the alarming suddenness of its onset very frequently, and the fact that the mind of the profession is by no means made up regarding the causation of this grave affection and the best means with which to combat it.

In 1842 Lever discovered that in the great majority of cases of puerperal eclampsia, albumin is present in the urine, and since that time the condition of the kidneys has been considered one of the most important factors in its etiology.

At the annual meeting of the British Medical Association, a most interesting discussion was held upon this subject by several prominent English obstetricians, and it may be of interest to briefly review some of the opinions expressed, since, from the high professional status of the assemblage, their utterances must be regarded as more or less authoritative. The causation of puerperal convulsions has been a rich field for discussion, and, with the increasing number of theories advanced during late years, it would seem that in the present state of our knowledge, definite conclusions are as far away as ever. This difficulty is, however, more apparent than real, for a careful study of the whole subject seems convincing that much light has been thrown upon both pathology and treatment by the carefully recorded clinical observations and experimental studies which have been made. A great deal of valuable negative knowledge is available, and also much that is positive, confirmed by repeated bedside experiences.

At the meeting already referred to (Annual Meeting Brit. Med. Ass'n., Section of Obstetric Medicine, Bournmouth, July,

1891), the etiology of puerperal eclampsia was discussed in three divisions, as follows:

I. The causation of that form of albuminuria which is associated with eclampsia.

II. The relation between the albuminuria and the convulsions.

III. The explanation of those cases in which the urine is at first free from albumin, and the albuminuria only appears after the convulsions; also of the exceptional cases in which albuminuria is absent throughout.

Regarding the first question, or the causeation of the albuminuria so frequently present in such cases, Dr. Galabin referred to the theory of Dr. Blane, of Lyons, who has isolated a specific bacillus from the urine of patients having puerperal eclampsia, which he regards as the primary cause of both the convulsive phenomena and the kidney lesion. In support of this theory Dr. Blane found that the injection of pure cultures of his bacillus into pregnant rabbits was followed by eclampsia, dyspnœa, and death; while in non-pregnant rabbits only local inflammation was produced at the point of injection. Therefore, Dr. Blane has reasoned, the bacillus is the primary cause, and that a poison is developed within the body which produces convulsions and nephritis by direct action upon the nervous centres and the kidneys. Dr. Galabin rejects this theory from lack of proof and because it would render puerperal convulsions a zymotic affection to which only pregnant women and rabbits are liable, and he prefers to believe in the uræmic origin of the eclampsia, even if the production of the nephritis cannot at present be satisfactorily explained. As powerful predisposing causes of albuminuria in primiparæ, he mentioned the increased intra-abdominal pressure of pregnancy which interferes with the renal circulation, and also the depressed state of the nervous system so often attendant upon a first confinement. Dr. John W. Byers, referred to the paper of Leyden, (*Deutsch. Med. Wochenschrift* March 4th, 1886), who considers the kidney lesion, associated with puerperal eclampsia, as a *special form* of nephritis, due to prolonged arterial anæmia, the primary causes of which, he thinks, is the altered intra-abdominal pressure.

Another interesting theory regarding the cause of albuminuria is that proposed by Stumpf, which is that a toxic nitrogenous product, probably acetone, is developed in the blood, and this in its elimination gives rise to nephritis. Other theories as to the origin of the kidney lesion of puerperal eclampsia are not wanting, and Dr. Braxton Hicks has advanced the view that the convulsions themselves cause the albuminuria. Santos attributes it to the strain and consequent irritation of the uterine nerves during the enlargement of the uterus, and that this acts reflexly upon the sympathetic and renal nerves, producing the convulsions and the albuminuria. Winckel conjectures the existence of several poisons which develop and act with varying intensity. Pagot considers the fits reflex, the nervous discharge occurring from the cerebro-spinal centre close to the albuminuric centre. The Traube–Rosenstein view is that the convulsions depend upon cerebral anæmia due to œdema of the brain which is caused by the hypertrophied heart of pregnancy pumping watery blood under high pressure.

Enough has been said to prove that there is complete want of agreement among the highest authorities concerning the importance of, and the cause producing, the albuminuria of puerperal eclampsia, and Byers undoubtedly states it truly when he says "I do not think we are yet in a position to give a dogmatic answer to such a question."

There is far more unanimity of opinion concerning the second part of discussion, viz: "The relation between the albuminuria and the convulsions." The weight of opinion seems to be, that when albuminuria is present it is usually associated with a diminution of the amount of urine, or the solids of the urine, and that the convulsions are due to the retention in the blood of certain toxic substances; while in those cases in which albuminuria is absent, the convulsions are simply epileptic, or are due to reflex irritation from the uterus, acting upon an excitable nervous organization.

Those cases in which albuminuria only appears after the occurrence of one or more convulsions have been explained by the theory that the kidney lesion in such cases is a pre-albuminuric nephritis—in other words, that the portion of the kidney which has to do with the transudation of albumen becomes affected last, and to this fact the late appearance of albumen in the urine is due.

Dr. Auvard, of Paris, has made a special study of eclampsia, and has formulated what he terms the "pathogenic theory," which is that puerperal convulsions result from a poisoned condition of the blood, due to diminished elimination by the liver and kidneys. His own words are,—"to sum up: the pathogenic theory views eclampsia as the result of a 'strike' on the part of the organs of elimination, giving rise to intoxication of the organism."

The treatment of puerperal eclampsia is of far greater importance in the present state of our knowledge than speculations regarding the multitude of theories which have been brought forward to account for the disease. This, of course, is modified largely by the severity of the attack, and the time at which it occurs. It is now well known that the mortality is higher when the convulsions appear during pregnancy than when they begin during labor, and that the prognosis is more favorable still if the convulsions begin after labor. Those cases in which the convulsive seizures begin early in labor are more fatal than when they begin in the last stages of labor. Statistics also show that the convulsions cease in one-third of all cases when the uterus is emptied, so it is not surprising that the induction of permature labor occupies such a prominent place in the treatment of cases occurring during pregnancy, and that rapid delivery is of so much importance when convulsions appear early in labor. Auvard, whose theory of the pathogenesis of puerperal eclampsia has already been stated, also sums up its treatment as follows: "The therapeusis of eclampsia comprises the three-fold indication to favor elimination by means of purgatives, durietics, and diaphoretics; and the three-fold indication of sedation by means of anæsthetics, venesection, and by emptying the uterus." Winckel, in his recently published text-book says: "Whenever the patient becomes restless, and the approach of an attack is thereby recognized, or as soon as the first contractions commence, chloroform is to be given, and the inhalation to be continued until the attack disappears. The chloroform acts, therefore, as a preliminary calmative until the chloral can be given (1 to 2 grammes=15–30 grs.), which is at once to be administered per enema, after each attack, and we are not afraid of giving as much as 12 grammes (=3 drachms) of the drug per day, and even more." Winckel's record is 92 cases with 7 deaths. Dr. Byers' treatment is chloroform and chloral, with rapid delivery if the case does not yield to these remedies. Another set of equally prominent clinicians rely upon venesection first, followed if necessary by chloroform anæsthesia and chloral, and thirdly delivery if indicated. Other remedies in common use are morphine, pilocarpine, nitroglycerine, amyl nitrite, veratrum veride hypodermically, the bromides, and brisk purgatives when the patient can swallow. Since every grade of severity of the convulsions occurs, it is impossible that any one treatment is applicable to all cases, and the time at which eclampsia appears, the condition and habit of the patient, the state of the urine, and the amount of albumin present should guide us in deciding the treatment of each case.

A CORRECTION.

On page 643, first column, 25th line from the bottom, the word "contraction" should read "combination."

CORRESPONDENCE.

PROMISCUOUS SPAYING OF WOMEN.

ED. MEDICAL AND SURGICAL REPORTER:

The operation of spaying or removing the ovaries of the female, has become such a

rage, with a certain class of ambitious young surgeons, each striving to count the greatest number of abdominal sections, that the woman who consults them for any gynæcological disease, is lucky if she escapes without being unsexed.

This subject has been forced to my notice, from the fact of several of my patients being induced to have the operation performed, without a due knowledge of its consequences, or the serious risk of life to which they were exposed. Of four cases that have recently come to my knowledge, in which the ovaries were removed, one died within twenty-four hours after the operation, the other three recovered from its immediate effects. One of the latter was a young married woman, married less than a year; she had consulted me for irritability of the bladder with a frequent desire to urinate. This I attributed to her changed condition of life and a somewhat nervous temperament. She was soon relieved by appropriate remedies and certain advice as to the marriage relation.

After a time the same state of affairs occurred again, when a lady friend advised her to visit a certain institution *that shall be nameless.* She was there informed that an operation would be required, to which she ultimately consented. (She positively asserts that she had not the slightest idea of the nature of the operation, or that her life was placed in the slightest danger.) Both ovaries were removed, and she recovered from the effects of the operation. In a few weeks after I was again sent for, and found her in great distress, her symptoms she declared were exactly the same, and she suffered even worse than before the operation, which was done ostensibly for her relief. And now she began to realize her deplorable condition, which to a young married woman, can be more easily imagined than described.

Wm. C. Todd, M. D.,
Roxborough, Pa.

THE APOTHECARY AND THE PRESCRIPTION.

To the Editor of the Medical and Surgical Reporter:—There have recently appeared a number of articles in our medical journals on the subject of the physician's prescription and its final retention by the druggist. It may be interesting to your readers to know the views of a writer of the 16th century and probably the first mention of the apothecary's prescription file.

"In the reigns of Edward VI, Mary and Elizabeth no one ranked higher than William Bulleyn, as botanist and physician." Among some of his rules for "The apoticarye" I find the following: "That he neither increase nor diminish the physician's bill (i. e. prescription) *and kepe it for his own discharge.*' These quotations are from the interesting book entitled "A book about Doctors" by J. Cordy Jeaffreyson.

Very truly yours,
G. Granville Faught.
October 24th, 1891.

Book Reviews.

ON PAINFUL MENSTRUATION—THE HARVEIN LECTURES, 1890. By Francis Henry Champneys, M. A., M. D. Oxon., F. R. C. P., Physician-Accoucher and Lecturer on Obstetric Medicine at St. Bartholomew's Hospital, etc., London: H. K. Lewis, 1891, 8vo., 88 pp.

Dr. Champneys is a man of such broad culture, a physician of such extensive experience, and a writer of such conscientiousness, that anything coming from his pen is stamped with a guarantee of value. We, therefore, opened this book with the assurance that we would find its pages full of valuable thoughts, and we were not disappointed.

Dr. Champneys has endeavored to collect here the truth, as far as ascertainable, into an easily accessible form. In doing this he has performed his task so acceptably that he has placed in the hands of the physician some invaluable information on a subject which is not only one of difficulty but of frequent occurrence in the every day work of the general practitioner.

In the first lecture he treats of menstruation, the changes in the uterus, the changes during the monthly cycle, the question of uterine contraction, the condition of the pelvic organs during the cyle, dysmenorrhœa, and the classification of dysmenorrhœa. The second lecture is devoted to the study of membranous dysmenorrhœa—its history, pathology, clinical history, causation of pain, differential diagnosis and treatment. The third lecture is a discourse on spasmotic dysmenorrhœa—its natural history, pathology, treatment, etc.

The work throughout is excellently done; and the last lecture will be a revelation to those who look upon dysmenorrhœa, as being of mechanical origin.

In the treatment of spasmodic dysmenorrhœa he has found that cases treated unsuccessfully by most, if not quite all of the usual drugs got well suddenly as soon as castoreum was given. He uses it in the form of a tinc-

ture, from twenty to thirty drops being given three or four times a day during the pain, with or without a few drops of the tincture of nux vomica.

No gynæcologist or general practitioner should be without this work.

PERISCOPE.

THERAPEUTICS.

ANTIPYRIN IN CHOREA.

Leroux (*Rev. Mens. des Mal. de l'Enf.*, August, 1891) concludes that antipyrin exercises a favorable action on Sydenham's chorea, quickly diminishing its intensity and shortening its duration. Of sixty cases treated, forty-one resulted favorably and nineteen unfavorably. Of the forty-one favorable cases, in nineteen the average duration of the disease was thirty-three days, and the treatment twenty-one days; in seven others the average duration was fifty-five days, and the treatment forty-three days; in seven the average duration was sixty-eight days and the treatment forty-nine days.

In nineteen cases the results were unfavorable for the following reasons:

1. The condition proved refractory to antipyrin.
2. The medicine could not be tolerated, vomiting, diarrhœa, etc., being caused by it.
3. Cutaneous eruptions were produced when intolerance existed.
4. Treatment was irregularly carried out or interrupted by an intercurrent affection.
5. In some cases the disease was prolonged in the form of convulsive tic, which was refractory to antipyrin, or post-choreic tic, which was usually cured in a few months.

HYPODERMIC INJECTIONS OF ARISTOL IN PHTHISIS.

At a meeting of the Paris Académie de Médecine on September 15th (*Sem. Méd.*, September 16th, 1891), M. Hérard read a communication from Dr. Nadaud, of La Rochefoucauld, giving the results which he had obtained by the hypodermic use of aristol in phthisis. Having observed the good effects of that substance on tuberculous ulcers, and having satisfied himself as to its harmlessness when given internally, Dr. Nadaud proceeded to use it hypodermically in the form of a solution of 1 cubic centimetre of aristol in 100 cubic centimetres of sterilized oil of sweet almonds. The first case in which he tried it was a child, aged 7, in whom hip-joint disease had left numerous discharging sinuses. One cubic centimetre of aristol was injected daily, and after twenty-five days there was no trace of suppuration. The injections were next tried in 23 cases of pulmonary phthisis, no other medication being employed. In 7 of these, after from twenty-five to thirty days of treatment, a complete cure seemed to be effected, and this was maintained up to the date of the report (from three to four months after the conclusion of this treatment). In 5 others, after rapid improvement, a relapse occurred within a month after the treatment had been brought to a close. After a second series of injections the symptoms again disappeared. In none of them was a third course of treatment required. In 3 cases in which large cavities existed in the lungs the effect of the injection was *nil*. Two patients died during treatment—one of diphtheria, the other of tuberculous peritonitis. The 6 who are still under treatment "for the most part show distinct improvement." Dr. Nadaud draws the following conclusions:—(1) Aristol given hypodermically is perfectly innocuous; (2) It is in a large measure eliminated by the lungs; (3) It acts as an antiseptic and as a modifier of nutrition; (4) It acts very quickly, the effects beginning to show themselves on the sixth or seventh day by diminution of cough and suppression of night sweats; (5) After from twenty to twenty-five days of treatment it is generally found that the patient had gained weight; (6) The injections are useful in the first and second stages of pulmonary tuberculosis; when cavities exist and the expectoration is purulent they have no effect, or a very slight one; (7) The injections cause no inflammation of the skin at the seat of puncture, nor are they followed by abscess, eschar, or induration; the pain is trifling. In commenting on Dr. Nadaud's paper, M. Hérard said that *a priori* the treatment was rational, inasmuch as aristol was composed of powerfully antiseptic substances. Dr. Nadaud's facts, however, in his opinion, were insufficient to form the basis of any practical conclusion. The cases must be numerous, and must be kept under observation for years before the therapeutic effects of aristol could be compared with those of creasote and guaiacol, which seemed to be really valuable agents.—*Brit. Med. Jour.*

HYDROCHLORIC ACID IN DIPHTHERIA.

Starting from the fact established by Roux and Yersin (*Bulletin Médical*, 1889), that the virulence of diphtherial toxines can be considerably diminished by slight acidulation of the bacterial products—especially with some mineral acid—Dr. S. H. Kraszewski, of Ivyë, resolved (*Gazeta Lekarska*, No. 28, 1891, p. 555) to try hydrochloric acid in six typical cases of croup in children, aged from six months to three years, and in five cases of faucial diphtheria in two children and three adults. The following formula was used: ℞ Liq. ferri perchloridi, *Ph. Roes.* (that is, equal parts of the iron salt and distilled water), 4 grammes; acidi hydrochlorici, 1.0 gm., aq. destillatæ, 200.0 gm. M. D.S.: A teaspoonful every fifteen minutes for one hour; then every thirty minutes for three or four hours; later on every hour. In faucial diphtheria the remedy was applied locally as follows: ℞. Liq. ferri perchloridi, *Ph. Ross.*, 8.0 gm.; acidi hydrochlorici, 1.0 gm.; aq. destill., 30.0 gm. M. D.S.: To be painted over the affected area with cotton-wool every two hours, a fresh piece being used on each occasion. The treatment lasted from two to five days, the only adjuvants employed being frequent gargling with a four per cent. solution of boracic acid in faucial diphtheria, and the internal administration of a 1.5 per cent. solution of sulphate of copper, in croup (as an emetic when symptoms of laryngeal obstruction were present.) Every one of the patients made an excellent recovery. In four out of five faucial cases the diphtheritic deposits vanished completely and permanently in from twenty-four to forty-eight hours, the throat becoming normal within three or four days. The fifth patient recovered in a week. The laryngeal cases (of which two had been apparently hopeless) were cured in from three to five days. In none were any unpleasant accessory effects observed.—*Medical Record.*

BICHLORIDE OF GOLD TREATMENT FOR INEBRIETY.

The so-called bichloride of gold treatment for inebriety, for which so much has been claimed, and to which the newspaper press has given such prominence, proves to be a rank humbug. Bichloride of gold, though a chemical possibility, is impossible therapeutically, as the preparation reduces and becomes inert the moment the chemical bichloride transformation is effected.

It is stated that the remedies employed by the manager of the institution, which has been chiefly identified with this treatment at Dwight, Illinois, are the hypodermatic use of cocaine and administration by mouth of the so-called bichloride of gold, which a recent analysis reveals to be a weak solution of aloin in water combined with comp. tr. cinchona. The only gold used in the treatment is that supplied by the dupes in the form of fees.

The favorable effects of this treatment are in part due to the action of cocaine, but chiefly to the mental effect on the patients who, emotionally stimulated by faith in the promised cure, are enabled to gain temporary control of their habit. The lay and religious press have given the chief quack and his humbug an amount of free advertising beyond computation.

The Secretary of the State Board of Health of Illinois is authority for the statement that the manager of this institution at Dwight was refused a license to practice medicine in Illinois.—*Med. Age.*

THE TREATMENT OF SMALL CYSTIC TUMORS BY MEANS OF INJECTIONS OF CHLORIDE OF ZINC.

This method which was recommended some time ago by Landerer has been used with success by Schilling. A one-tenth per cent. solution was employed, of which 0.2 to 1.5 c. cm. were injected into the cyst. In cases of extensive tumors of the sheaths of the tendons, as for example on the back of the hand, several injections were made at the most prominent places. The procedure is almost painless. The cysts after injection become at first hard and then softer; they disappear almost completely in four or five weeks. Sometimes the injection must be repeated. The operation is sometimes followed by œdema and slight hyperæmia of the surrounding skin, which are best treated by wet compresses. The author has treated in this manner three cases of simple ganglia at the back of the hand, one hygroma over the patella, and one hydrocele in a man fifty-six years old.—*Wiener Medizin Presse*, No. 32, 1891.

HYPODERMIC INJECTIONS OF CARBOLIC ACID IN TETANUS.

MM. Fancel and Frache report (*Arch. de Méd. et de Pharm. Milit.*, September, 1891) a case of traumatic tetanus in which a cure was effected by means of hypodermic injections of carbolic acid. The patient was a

man, aged 32, who had received a superficial wound of the left forearm from the bursting of a gun. The man, who was a bricklayer, continued to work at his trade without having had the wound dressed, and on the third day he was suddenly seized with rigidity of the limb, which was quickly followed by lock-jaw, opisthotonos, and other symptoms of tetanus. On examination of the wound it presented a healthy appearance, but some fragments of lead were found in it and removed. Treatment by chloral, bromide of potassium, subcutaneous injections of hydrochlorate of quinine, etc., having proved futile, injections of carbolic acid were tried, 1 centigramme being given every two hours, and all other medication being discontinued. The effect was almost immediate, the spasms becoming much less violent and less painful, and the patient's general condition showing marked improvement. The injections were continued for seventeen days, and the patient was finally discharged completely cured, fifty days after his admission to the Hospital. The authors refer to the introduction of this mode of treating tetanus by Baccelli, who reported a case in which he had employed it successfully to the first Italian Congress of Medicine in 1888. They do not, however, agree with him in attributing the efficacy of the treatment to the sedative action of the carbolic acid on the spinal centres, but regard it as due to the parasiticide power of the remedy.—*Brit. Med. Jour.*

MEDICINE.

DIGESTION ACTIVITY IN MENTAL DISEASES.

An article on this subject appeared (*St. Petersburg Med. Woch.*) by Dr. E. Grabe, in which he attempts to elucidate the question of nervous dyspepsia as he considers it the most important, because the most frequent, of the neurasthenic indigestions due to functional disease of the nervous system.

In examinations of the stomach contents in a number of psychoses, over a given time, it was found that the mental condition had much influence on the general economy. Leyden's conclusions on this subject after making observations during health and disease, were that the functions of the stomach and appetite and digestion were under the influence of the central nervous system and that stimulation or depression resulted in alteration of function. It must then be accepted, that in a high grade of psychical disease, the stomach functions cannot be normal and that the resulting dyspepsia is therefore a neurosis. Notwithstanding some new views to the contrary, recent examination of the stomach juices in fourteen cases of melancholia, the patients being otherwise in general good health, showed hyperacidity, due to free hydrochloric acid and decrease of peptic formations. Hypersecretion was not, however, constant. Under such circumstances it is not surprising that appetite is lost in melancholia and allied diseases. Krafft-Ebing, in his text-book on Psychiatry, says that the explanation of the loss of appetite in dyspepsia, melancholia and hypochondria is due to the lessening in the quantity of, or chemical alteration in, the digestive fluids. In the twelve cases of mental disease, examined by the author as to the condition of the stomach secretions, all were found to contain free hydrochloric acid and lessened peptonoid products.

The irritated state of the nervous apparatus in the various forms of mental diseases seems then to be responsible for the secretion activity of the stomach resulting in the production of hydrochloric acid. It is the author's intention to make further investigation as to the constancy of the functional alterations in psychoses.

INFECTIOUS ORIGIN OF RICKETS.

Dr. Stephano Mercoli alleges as the result of certain bacteriological researches, that pyogenic microbes are present in the nerve tissues of persons suffering from sciatica, chorea, and hydrocephalus, and the most common of those found are the staphylococcus and streptococcus. He has also been examining most minutely children who have died from hydrocephalus and rickets, and from the bony tissue of the latter, ribs, forearms, and so forth, he has been able to obtain, so he affirms, pure cultures of pyogenic microbes. According to this authority rickets is a parasitic disease; he believes that in adults the microbic activity is not enough to cause more than a local manifestation of the disease, whereas in children the infection becomes general, but it is chiefly in the nervous and osseous tissues in which its effects are most manifest. It would be convenient if we were made a little more acquainted with the details of these bacteriological investigations before being asked to accept the results to which they are presumed to point.

ACUTE YELLOW ATROPHY OF THE LIVER.

Burckhardt (*Corresp.-bl. für. Schweizer Aerzte*, August 15, 1891) reports the case of a widow, thirty-two years old, who, after profound emotional depression, developed jaundice, followed in turn by delirium, with but slight elevation of temperature, death taking place in coma. The autopsy confirmed the diagnosis of acute yellow atrophy of the liver. Burckhardt takes occasion to controvert the view that acute yellow atrophy is always the result of phosphorus-poisoning. In the former, the primary enlargement of the liver and the colicky pains of the latter are wanting, while the maniacal manifestations of acute atrophy are absent in phosphorus-poisoning. Examination has thus far failed to find phosphorus in the organism in acute yellow atrophy. From the absence of fever in, and the sporadic appearance of, acute atrophy, Burckhardt is unwilling to place it in the category of infectious diseases. He would rather ascribe the symptoms to the absorption of abnormal products developed in the course of parenchymatous inflammation of the liver induced by an unrecognized noxa.

PERIPHERAL NEURITIS IN DIABETES.

In a communication by Auché, of which a summary is given in the *Neurologische Centralblatt*, the author refers to the fact that although there is strong clinical evidence of the existence of peripheral neuritis among diabetics, no absolute proof that the condition giving rise to symptoms of neuritis is really one of inflammation of the peripheral nerves has as yet been brought forward. This, however, is the view which the writer adopts, and which he proceeds to prove by means of his own observations and those of others, embracing almost every form of disturbance of the nervous system occurring in diabetics. He also cites his histological observations, showing widespread inflammatory processes in the peripheral nerves. In the summary of his views of the subject the author states that the upper extremities are attacked with less frequency than the lower, that the affection is mostly bilateral, but may be one-sided, that the functions of the bladder and rectum are unimpaired, and that atrophy and the reaction of degeneration are present in the affected muscles. Sensory disturbances, consisting of pains, hyperæsthesia, paræsthesia, or anæsthesia, frequently precede motor troubles, but may accompany them, or may occur alone. Vaso-motor troubles, such as hyperidrosis, œdema, shiny skin, and ecchymosis, may also be present as well as trophic disturbances, such as perforating abscesses, local atrophy of skin, falling off of nails, &c. The loss of knee-jerk which occurs in some cases of diabetes is to be ascribed to neuritis. The author in conclusion refers to the generally accepted opinion that the nervous symptoms are not at all proportional to the quantity of sugar in the urine. Some researches which he made as to the effect of injections of saccharine solution in the vicinity of the sciatic nerve led him to conclude that sugar was not the active agent in setting up changes in nerves; but that such changes are more probably to be ascribed to the presence in the blood of acetone or of some as yet undescribed chemical substance. —*Lancet.*

MORPHOLOGICAL CHANGES IN THE BLOOD CAUSED BY INJECTIONS OF TUBERCULIN.

Recent investigations, carried on by Dr. N. W. Uskoff, have shown that the injection of Koch's fluid causes a temporary increase in the number of leucocytes, such increase affecting mainly the proportion of multinucleated cells. Dr. N. Tschistowitsch (*Berlin klin. Wochensch.*, August 24th, 1891) publishes five further cases in which the leucocytes were counted while under treatment by Koch's injections. Considerable variation was noted in the five cases. On the whole, however, he, like Uskoff, found that an increase in the number of white corpuscles occurred, this leucocytosis consisting mainly in a multiplication of the multinucleated elements and often, also of the uninucleated elements with lobulated nucleus. An increase in the other forms of leucocytes also occurred in severe cases, but was less constant. This form of leucocytosis, induced by the injection of Koch's fluid, sets in very rapidly, before any other signs of reaction have appeared. It disappears again equally quickly, to be followed by a diminution in the number of white corpuscles. In harmony with this observation of the power that Koch's fluid has to cause a multiplication of leucocytes, and especially to promote the development of immature into mature forms, is the fact that the presence of tubercle bacilli in a tissue (whether these have entered spontaneously or been artificially inoculated) provokes a rapid aggregation of leucocytes in such tissue.—*Brit. Med. Jour.*

ACTION OF PRODUCTS OF BACILLUS PYOCYANEUS.

MM. Morat and M. Doyon (*Lyon Medical*, May 31st, 1891, p. 143), using the filtered products of the bacillus pyocyaneus, found that after the injection of from 10 to 20 cubic centimetres into the veins of a rabbit the pneumogastric soon lost its inhibitory action on the heart; the vasodilators of the sympathetic trunk were paralyzed, whilst the vaso-constrictors remained unaffected, even under considerable irritation; the iridodilator nerves of the sympathetic, however, still remained active; but the chorda tympani lost its vaso-dilating power. These results they found, however, could not be obtained in the case of the dog; nor were they able to obtain any evidence of any action of this poison on the sympathetic trunks in the cat. —*Brit. Med. Jour.*

MORVAN'S DISEASE.

Church (*Journal of the Amer. Med. Association*, 1891, No. 10) reports a case of so-called Morvan's disease, with a brief review of what is known on the subject, the literature of which is scanty. The affection is characterized by a destructive process, progressively and symmetrically involving the digits, ulceration with exfoliation of the bone taking place, and resulting in deformity, sometimes preceded by pain and attended with anæsthesia. In the only case of the disease in which an autopsy has been reported, an excess of connective tissue was found in the posterior horns, posterior columns, and gray matter of the cervical cord and in the peripheral nerves. Nothing is known as to its etiology. The disease is to he distinguished from scleroderma, anæsthetic lepra, symmetrical gangrene, and syringomyelia. The treatment is symptomatic.

THE RETURN OF THE KNEE-JERK IN A TABETIC.

Dr. J. Hughlings Jackson, in the *British Medical Journal* for July 11th, reports a very interesting case of return of the knee-jerk, after hemiplegia, in an old case of tabes. The patient, a man of forty-nine years of age, had contracted syphilis some twenty-three years previous to the report of the case. At the time that he came under observation, in February, 1888, the symptoms of tabes were typical. There were also some evidence of hemiplegia, the patient having suffered from two attacks a short time before his admission to the author's service. About forty-seven days after the second attack of hemiplegia the return of the right knee-jerk was noticed, and subsequently the left was obtainable by re-enforcement. It was presumed that the return of the patellar reflex was contemporaneous with the establishment of sclerosis of fibers of the pyramidal tract in the bundle of deep fibers of the lateral column. It is well known that in many cases of uncomplicated hemiplegia there is exaggeration of both knee-jerks. It has been shown by various authors that at least in some cases of lesion of one internal capsule there has followed degeneration of fibers in both lateral columns.

SURGERY.

EXTIRPATION OF THE LARYNX.

Tauber (*Archiv. f. klin. Chir.*, Bd. xli., Heft. 3) has tabulated 163 cases of extirpation of the larynx, and has analyzed his tables with typical German minuteness. As a general result he finds that the operation is followed by death in 69.9 per cent. of all cases. Permanent cure—that is, failure of the disease to return for three years after operation—is noted in 7.9 per cent., of the cured cases. It is a well-known fact that in Spencer Wells' hands ovariotomy gave a mortality of 70 per cent., and that by improvement in technique this mortality has fallen to less than 4 per cent. There is little hope held out by Tauber that a similar improvement in the results of laryngectomy may be expected, since the percentage of death is the same now as it was ten years ago.

It would seem from this study that laryngectomy is an operation which should not be performed, since even when from mechanical interference a tumor of the larynx threatens to produce a fatal result, tracheotomy, will afford immediate relief, and there is about as much assurance against recidivity as is afforded by complete extirpation of the larynx, at least in such cases as are far advanced.

Bardenheuer (*Ibid.*) takes quite an opposite view of this operation. He believes that he has so improved the technique that the mortality will be greatly lowered, and instances, in proof of this fact, that while his first four patients died immediately following the operation, the last four, treated by a different method, all recovered. He found that the patients died not immediately after the removal of the tumor, but in from four

to eight days, and that the mortality was due to septic inflammation, usually beginning in the deepest portion of the wound, in the space between the trachea and the surrounding muscular tissues. From this position inflammation extended along the loose cellular tissue of the neck into the mediastinum, and death usually resulted from septicæmia and pneumonia. The cause of infection was usually penetration of the liquid food and of the secretions of the mouth into the deeper portions of the wound. Bardenheuer modified his laryngectomies by attempting to sterilize the mouth for several days before operation.

The teeth were subjected to repeated frictions with antiseptic solutions, and the mucous membrane was dried with salicylic cotton. His next modification consisted in so placing the patient after operation that secretions of the mouth could not drain into the wound. The mattress was so arranged that the head was extended backward, and the pharynx was on a lower level than the cavity made by extirpating the diseased trachea; hence fluids gravitated to the mouth, and not away from it. His final modification consisted in carefully respecting the anterior wall of the œsophagus and the mucous membrane of the trachea immediately below the epiglottis, so far as it was healthy. After removal of all the diseased portions, the anterior wall of the œsophagus was brought forward and stitched to the mucous membrane of the trachea, thus forming a septum between the mouth and the wound cavity. Further, the free edge of the epiglottis was freshened and stitched back to the anterior wall of the œsophagus. The cavity of the wound was then firmly packed with sterilized gauze, and the dressing was changed in from two to eight days, depending upon the length of time the stitches held. Frequently the patient was able to swallow, thus relieving the operator of the necessity of passing an œsophageal tube. The sutures shutting the mouth from the wound cavity need not be left longer than fourteen days, since this is a sufficient time to allow of protective granulations being formed.—*Amer. Jour. Med. Sci.*

CASES OF BRAIN SURGERY.

Dr. Minossi reports (*Gazzetta degli Ospitali*, March 15, 1891) two cases of brain surgery, in which Professor P. Postempski, of Rome, was the operator. One was a case of cerebral tumor in a woman, aged 58. She had suffered from pain in the right arm for some ten years, which had gradually increased in frequency and severity, till it became continuous; the movements of the limb had also become somewhat difficult. On November 21, 1890, she was seized with clonic convulsions in the limb, with clonic contraction of the eye-lids, and of all the muscles supplied by the right facial nerve. She did not lose consciousness. Other attacks of a similar kind followed at varying intervals, and aphasia, with transient verbal amnesia and paresis of the right facial and hypoglossal nerves, came on. The right arm, when left to itself, lay semiflexed, the thumb being in the same plane as the fingers, which were also semiflexed. Sensibility in the limb was unimpaired. Professor Ezio Sciamanna, under whose care she was, sent her to Professor Postempski, with the diagnosis of tumor in the left motor area. On February 23, Postempski removed a subcortical tumor (probably a glioma) of the size of a large chestnut, which occupied the region of the left ascending parietal convolution in its middle part. The operation was immediately followed by right hemiplegia, due to plugging of the wound, and the next day the urine was found to contain a moderate amount of sugar, with traces of albumen. The wound healed by first intention, and the symptoms rapidly disappeared. The patient was shown at a meeting of the Royal Medical Academy at Rome, on May 24th (*Riforma Medica*, June 4, 1891), when the mental condition was absolutely normal, and there was no disorder of speech; she felt well, and was cheerful; there was no impairment of mobility, either in the right arm or in the regions of distribution of the facial and hypoglossal nerves. The right hand could be closed, but the fingers could not be fully extended. There was a certain amount of thinning of the skin on the dorsal surface of the ends of the fingers, and some thickening on the palmar, especially in the thumb. In the other case the patient was a man, aged 37, who had been struck with a hammer on the left side of the head. There was a compound stellate fracture of the skull over the region of the Rolandic fissure. When seen soon after the injury the patient was aphasic, and there was complete hemiplegia and hemianæsthesia of the right side. The head was shaved and disinfected, the wound enlarged, the depressed bone removed over an area of 3 square centimetres, and a light dressing applied. Three hours afterwards the hemiplegia had almost disappeared, but there were zones of anæsthesia on the outer

aspects of the thigh and arm. Six days later these also disappeared, and nineteen days after the injury the patient had completely recovered.—*Brit. Med. Jour.*

NOTES ON PYOKTANIN.

Pyoktanin, the trade-marked name of certain aniline colors (methyl-violet or "blue pyoktanin," and aurin [?] or "yellow pyoktanin"), has so far found many supporters, but also many opponents. Its supporters use it because it has been found to be, under certain circumstances, the most efficient antiseptic and bactericide at our disposal. And its opponents base their chief objection upon its disagreeable and extraordinary tinctorial powers. Moreover, some who used it without prejudice have reported it to have failed in their hands.

Regarding the latter it may be said that there may have been various causes for the failure, not due to the agent itself. One of these may have been the age of the solution. It has been found that the bactericidal power of the solutions of these aniline colors is rapidly lost by keeping. Solutions of pyoktanin should be freshly made when wanted for use, or, if to be kept for some days, should be preserved in bottles made of non-actinic glass.

Concerning the bactericidal power of pyoktanin, the experiments of Jaenicke may be quoted. The latter found that the development (but not the life) of the following bacteria was arrested by solutions of the dilution quoted in each case:

	Strength of Solution.
Bacillus of Cholera	1:62,500
Coccus of Pneumonia	1:1,000,000

To destroy their life or vitality, solutions of a higher strength were required, varying from 1 in 1,000 to 1 in 5,000 for the same period of time (one-half minute). In some cases more dilute solutions will accomplish the same purpose, but they require more time.

Pohl, who has recently published a dissertation on this subject, points out that the objection against pyoktanin, based upon its tinctorial power, is perhaps due to the use of this agent in cases where it is not at all wanted. It is not claimed that it has advantages over corrosive sublimate and similar antiseptics, when the object is to prevent a wound from becoming septic. Our present methods—application of dressings, bandages, sprays, etc., containing sublimate, etc., or sterilized by heat—are ample for this purpose. But pyoktanin comes especially into use and fills a real gap when the object is *to disinfect a wound which has become infected or septic*, for which purpose we had heretofore no efficacious agent.—*Amer. Druggist.*

BASSINI'S RADICAL CURE OF HERNIA.

At the recent Congress of German Surgeons, Dr. Escher, of Trieste, reported his results from this method of operation. It consists in laying open the inguinal canal over its entire extent and somewhat beyond; the spermatic cord and hernial sac is then lifted up, and the latter incised up to its neck, and then ligated, excised and the remaining portion replaced. The layers of the internal oblique and transversalis muscles are then carefully isolated, as well as the internal portion of Poupart's ligament, and the edges of these structures are accurately united by suture. The spermatic cord is sutured in this gutter, and the fascia, muscles and skin united. The author has employed this method in the treatment of 53 herniæ. The results were as follows: Of the 35 cases of reducible herniæ 25 per cent. healed by first intention, 10 with suppuration; of the 9 cases of incarcerated hernia 5 healed by first intention, 3 with suppuration, and 1 terminated fatally; of the 9 cases of irreducible hernia 4 healed by primary union, 4 by suppuration and one died. As regards the permanence of the cure, in 24 cases which can be utilized for this purpose, there have been no recurrences during a period of observation varying from three months to two years.—*Deutsche Medicinische Wochenschr.*

NEPHRECTOMY FOR CARCINOMA.

Krönlein (*Corresp. bl. für Schweizer Ærzte*, August 15, 1891) presented to the Society of Physicians of Zurich, a kidney obtained from a woman, forty-four years old, who for a considerable time had presented symptoms of floating kidney. Subsequently hematuria manifested itself, and a large tumor was detected in the right side of the abdomen. Operation having been decided upon, a lumbar incision was made and the kidney separated from the peritonoum without injury to the latter. In isolating the pedicle the renal vein was torn. The vessel was speedily caught and ligated. Drainage provided for, the wound was sutured. The case pursued an even and afebrile course. There were no uræmic symptoms. The tumor had not invaded the con-

nective-tissue capsule of the kidney, so that the prognosis was favorable. Five weeks after the operation, the patient was dismissed, cured. Microscopical sections showed the tumor to be a papillary carcinoma. Krönlein stated that he removed the kidney in three cases for carcinoma.

GYNÆCOLOGY.

OFFENSIVE LEUCORRHŒA ASSOCIATED WITH ACUTE ANTEFLEXION.

Dr. Graily Hewitt reports the following case (*Brit. Med. Jour.*) which is of great interest both from a theoretical and from a practical point of view. A. B., single, aged 27, was brought to me for consultation on Oct. 8th, 1890. She is a servant, and has worked extremely hard. She is very conscientious, and during the last year she has frequently sat up at night to do extra work; namely, washing. During the last two years her health has been failing. The symptom which is the most distressing is the presence of a terribly offensive odor and discharge from the vagina. This has existed for nearly two years, being always very much worse during the week following menstruation. She is now obliged to have repeated change of linen, and the greatest difficulty is experienced in getting rid of the offensive smell from the rooms used by the patient. She looks ill and pale, there is pain at the epigastrium, also pain in the pelvic region, and she can only sit on the edge of a chair. On examination it is found that the uterus is large and broad, and anteflexed. The body of the uterus forms a retort-shaped mass, which lies low down behind and below the symphysis pubis. By means of the sound the uterus can be straightened, but doing this occasions much pain. The size of the uterus is that of a small orange.

The diagnosis formulated was: retention of menstrual *débris* with decomposition of same due to a pouched anteflexed uterus.

Treatment: Insertion of a cradle pessary and plenteous carbolic injections of hot water. Diet: Milk in large quantity.

October 15th. Much better as regards pain and offensive leucorrhœa. October 31st. Very much better. Wearing cradle, which controls the position of the uterus satisfactorily. The last period more as it should be. Has now begun to do a little. April, 1891. The offensive discharge has now ceased, the position of the uterus good. Local treatment continued. Takes food well, and in all other respects material improvement.

Whatever view may be taken of the above case it is the fact that the reposition of the uterus at once produced an alteration in the vaginal discharge. The patient had previously been treated by injections, etc., unavailingly. By elevation of the body of the uterus the contents of the organ (retained menstrual products) more easily escaped, and their decomposition was prevented. The intensity of the anteflexion in this case was very noticeable, and Dr. Hewitt says he has never seen such acute anteflexion except in cases where very unusual exertion, or a violent shock from an accident has been experienced. It is his belief that retention of menstrual products in cases of acute anteflexion is common. The rarity of the case above related is the long continued putrescent character of the discharge.

The explanation of the putrescence is probably the detention of menstrual shreds in the cervical canal in contact with air passing into the vagina, or even possibly passing into the uterus. As regards the presence of air in the vagina, some years ago he saw a case in which, whenever the patient sat down to table, flatus was expelled from the vagina in a most annoying manner. It was found that the uterus was large and heavy, and markedly anteflexed. The vagina was distended like a ball. The opinion formed was that the air entered the vagina consequent upon exaggeration of the displacement, and a sort of suction action was set up thereby. At all events the reductionof the anteflexion put an end to this disagreeble symptom. There was no such escape of flatus in the case above related, but the putresence implies rather free admission of air into the vagina, which admission was probably favored by the anteflexion.

OBSTETRICS.

PUERPERAL MANIA.

In a recent essay, Olshausen, of Berlin, quotes the following language, used by Donkin, in 1863, with the comment that to-day it is approximately true. "There is certainly no subject connected with obstetrical science in a more crude and unsatisfactory condition than the pathology of puerperal mania." The ætiology especially needs illumination. It cannot be denied, with our present knowledge, that bodily causes connected with the parturient pro-

cess associated with those acting on the mind, especially when an hereditary predisposition is present are adequate to the production of a puerperal psychosis. But there is not a shadow of doubt in our mind from careful study of a number of cases that Olshausen is entirely correct when he asserts that there are numerous cases in which the puerperal psychosis is connected very closely with severe infectious disease of the puerperal woman and can only be explained by this association. Not long since Hansen in an admirable paper published in the *Zeitschrift für Geburtshülfe u. Gyn.* insisted upon this connection and illustrated his views by appropriate examples. It is to be regretted that so few writers of text books on Obstetrics have given sufficient prominence to this relation. Clinical investigators have now the important problem to solve, as to what forms of infectious diseases are likely to give rise to psychoses, and further as to the anatomical basis of the psychoses. Olshausen is of the view from his experience, that cases of puerperal pyæmia as likewise cases of endocarditis ulcerosa are readily associated with acute psychoses. It is rarer, on the contrary, to find cases of pure septicæmia so associated. When the pyæmic form of puerperal fever leads to the psychoses it is very probable that meningitic and encephalitic processes have taken place, especially capillary emboli, which are the anatomical cause of the psychosis and in the autopsy have been overlooked. In life the phenomena observed are often only those pertaining to a pure psychosis with a considerable degree of fever.

When there is no peritonitis the diagnosis of an infection may escape the physician, the more readily, as regular measurements of the temperature may not be possible on account of the restlessness or wild delirium of the patient and no demonstrable localizations may be found in the joints or other organs. Besides the psychoses due to infection and the puerperal mental diseases originating from pure physical causes, there is a third group, the psychoses after eclampsia. This class of cases has heretofore not received the attention its importance deserves. With regard to the time of appearance, the form and the course of the psychoses after eclampsia Olshausen instructs us as follows. Almost always the disease begins in the first days of the puerperal period, consequently only seldom as early as in other psychoses.

The third day of the puerperium is the one by preference for the outbreak. More rarely it is the second or fourth. In the majority of cases an interval of a day elapsed after the recovery of the patient from the eclamptic coma and the return of consciousness, before the phenomena of the psychosis developed. In one or two cases, however, hallucinations followed immediately the awakening from coma, so that a condition of lucidity of consciousness could not be predictated. The psychoses appeared in every case with hallucinations. In the majority of cases the illusions related to the sense of hearing, in others to that of sight. Not infrequently the patients believed themselves to be objects of pursuit. Great restlessness is a frequent symptom, the patients wish to get out of bed, yet, as a rule, they can be easily restrained, occasionally the psychosis bears the character of melancholia.

Furious delirium is rare—suicidal attempt is very uncommon. The disease runs a speedy course and for this reason cases rarely come under the care of Alienists in Insane Asylums. With regard to symptomatology it should be noticed that in a number of cases the temperature and pulse attained to an unusual height during birth with no sort of local disease. Without doubt in these cases of psychosis after eclampsia the morbid condition is one of empoisonment in close connection with uræmic change of the blood conformably to the psychosis observed occasionally in chronic disease of the kidneys.

Olshausen recommends accordingly the following classification, with reference to puerperal psychosis.

1. Psychoses that are directly dependent upon febrile infectious puerperal disease, infection-psychoses.

2. Idiopathic psychoses (without corporeal, febrile disease.) Here belongs the great majority of the psychoses of pregnancy and lactation and a portion of the psychoses of the puerperal period.

3. Intoxication-psychoses after eclampsia, or exceptionally in uræmia without eclampsia.—*Gaillard's Med. Jour.*

PÆDIATRICS.

PSYCHOSES IN CHILDHOOD.

Dr. E. Doernberger reports a case (*Münch. Med. Wochenschr.*, July 7th, 1891) of insanity, complicated with chronic morphinism, occurring in a child. The patient was healthy until 2 years of age, when she was violently thrown down in a wagon by the horses bolting. Greatly terrified at the time, she fell into a delirous and feverish

state, lasting about ten days. Several months later paroxysms of screaming and outbursts of maniacal laughter and incoherent singing occurred. Some years later she suffered acute headache for several weeks. In the course of a year or two, nocturnal terrors, with visual hallucinations of thieves and fire, developed, and her disposition became intensely excitable and violent. To quiet her the parents commenced to inject her at night with 0.016 g. of morphine; they gradually increased the amount to 0.008 g. six or seven times daily without noteworthy improvement. Severe cephalalgia and palpitation ensued, together with frequent emesis, thirst, epistaxis, and deranged intestinal action. When placed under Dr. Doernberger's care the patient's age was 11 years; she was emaciated, weak, and languid, excitable, nervous, and vicious; her memory and power of learning were impaired; the pupils were contracted and sluggish. The morphine injections were immediately discontinued; decreasing doses of the alkaloid in potassium bromide solution were substituted, in addition to special hygienic measures. Phenomena of abstinence at once appeared; excitement increased; auditory and visual hallucinations were vivid; the patient craved for an injection. At the end of three months of this treatment the symptoms of morphinism subsided, leaving the original mental anomalies practically unchanged. Within a few months the patient relapsed into morphinomania, her mother having recommenced the injections to assuage the head pain. Notwithstanding that the patient's father was of deficient intellect, her mother extremely nervous and addicted to the morphine habit, and that other neuroses abounded in the nearest relatives, Dr. Doernberger considers that the heredity in this case is not sufficiently established; he would rather attribute the insanity to cerebral abscess or meningitis produced by the accident.—*Brit. Med. Jour.*

PERITYPHLITIS IN CHILDREN.

Beynes (*Gaz. Méd.*, May 23, 1891) writes that the cæcum is fixed at the lower border of the large intestine, and is connected with the appendix by its mesentery. In children fæcal matter readily penetrates it, and the anatomical condition may be said to predispose to appendicitis and to perityphlitis, with perforation. In almost all cases of perityphlitis in children it is the appendix which is perforated. The general causes which give rise to the condition are the same in children as in adults. But additional and not infrequent causes are tuberculosis of the mesenteric glands, abscesses following congestion and perinephritic abscess, with or without pyelonephritis. Among the local causes may be mentioned stagnation of undigested material, calculi of stercoraceous matter, biliary calculi, foreign bodies, gangrenous perforating appendicitis, and typhoid ulcerations of the closed follicles of the large intestine. The lesions of perityphlitis in children are those of pericæcal peritonitis, which may be sero-fibrinous with adhesions, and curable, but liable to be followed by recurrence; or it may be suppurative and with a tendency to result in general peritonitis. Perityphlitis may result without perforation of the appendix.

The symptoms at the beginning are vague; there may be a coated tongue, pain in the abdomen, vomiting, and fever. Suppuration, as was shown by Grisolle, does not usually take place before the tenth or fifteenth day. The principal indications of such an occurrence are an exaggeration of the local and general symptoms and a tumor in the iliac fossa, which may show fluctuation. Percussion may give a note indicating the presence of fluid and gas. The abscess may open externally or into the cæcum, these two terminations including almost all cases. But the opening may take place in the peritoneal cavity, in the rectum, in the internal iliac artery, or the termination may be chronic peritonitis or pyæmia.

The most favorable termination is that in which the opening is exterior. The prognosis of this disease is more grave in children than in adults. In forty-six cases the mortality was thirty-nine, while in adults the mortality is about thirty per cent. General peritonitis frequently results, and if the patient recovers there frequently remains a deposit in the iliac fossa which predisposes to recurrences. If abdominal section is to be performed it should be done early in the disease.

HYGIENE.

THE USE OF THE FLESH OF POISONED ANIMALS.

This subject has been studied by Schmidt-Mulheim with a view to determine whether if eaten by men such flesh would be injurious. As reported in the *Revista Internazionale d' Igiene* of Naples, for June, 1891, it may be used without any danger whatever. Many

savage races constantly use the flesh of the animals that have been killed with poisoned weapons and have never been injured by that means.

Harms has proved that the flesh of animals that have been poisoned with nux vomica and with tartarized antimony is not at all hurtful; Feser has demonstrated the same fact in regard to strychnine and eserine; Spallanzani, Zappi and Sonnenschein have done the same for arsenic.

Froehner and Knudson have made some experiments for this purpose with strychnine and with eserine. They fed dogs with large quantities of mutton poisoned with strychnine and eserine, and they found that no injury whatever was done to the animals. Besides, they themselves ate some of the poisoned meat and drank soup made from it, and found that the flavor was good and had no injurious effects whatever on the system.

In regard to the alleged injurious effects caused by the meat of animals poisoned with hellebore, and which had eaten belladonna leaves, the authors have shown that the accounts published in this regard have not been proved and require further tests.

The *Revista* says that in the interest of meat inspection, it is desirable that experiments should be made with other poisons.—*Univ. Med. Mag.*

THE INFLUENCE OF REST ON THE SENSIBILITY OF THE RETINA TO LIGHT AND COLOR.

Basevi (*Ann. di ottalm.*, vol. xviii, 6, p. 475) has made careful investigations upon himself and others as to the adaptability of the retina for white and colored light. His results are very similar to those of Aubert, Peschel, and Treitel. The eyes of the person upon whom the experiments were about to be performed were rested in a partially darkened room for about fifteen or twenty minutes. The room was darkened with heavy curtains. The author found that after this period of rest the visual acuity had been increased threefold as measured by Snellen's types. The sense of light, measured by Treitel's tests, was found to be increased eighteenfold. After the eyes had been rested and light was gradually admitted, the colors were recognized in the following order: red, yellow, green, and lastly blue. When color fatigue for any particular color was produced with a glass of that color, it took a position last in the series. The visual field, both for light and colors, was found to be enlarged, but the period of rest required to be longer and the darkness greater. The author concludes, from his experiments, that night blindness is a disturbance in the adaptability of the eye.

PHYSIOLOGICAL EXPERIMENTS ON THE EFFECT OF ALCOHOL.

It has been well established in late years that under certain circumstances the continued use of alcohol produces a form of inflammation of the nerves known as multiple neuritis, or clinically, as alcoholic paralysis. These cases are rare and often occur in those whose indulgence in alcohol has not been excessive, so that it has seemed as if some element besides alcohol alone was necessary to cause the nervous disorder. Experiments with alcohol upon the lower animals have not heretofore shown that its continued use produces any such condition as multiple neuritis in man.

In a recent essay, however, by Dr. P. F. Spaink, of Baarn, Holland, to which was awarded the Mason Prize, some facts are given which seem to show that alcohol does have a directly degenerating influence upon the peripheral nerves. Only an abstract of Dr. Spaink's work has as yet appeared (*Journal of Inebriety*), and many details are lacking. But we learn that Dr. Spaink fed several series of rabbits with pure alcohol, giving them from 2.3 to 8 cubic centimetres daily (℥ ss., ℥ ss.). The animals were finally killed and the peripheral nerves examined microscopically, control animals being used. In the great majority of cases degenerative changes were noted. They consisted essentially in a splitting or fissuring of the nerve, with the appearance of elongated, usually large, collections of myeline, thickened or thinned parts of nerve fibres, myeline drops, or simply neurilemma sheaths. Very rarely could any increase of nuclei be observed.

Besides this a large number of specimens showed, in addition to the above-described degeneration, a further peculiarity. This was a twisting or looping, after a corkscrew fashion, of the axis cylinders. These corkscrews recurred at varying distances on the same or neighboring fibres. At these twisted spots the axis cylinders appeared thicker, broader, and more diffuse than when their course was direct. Sometimes in badly-stained preparations these corkscrews were all that could be seen of the axis cylinder.

Since a splitting of the nerve fibres and

corkscrewing of axis cylinders are changes unknown to human nerves in alcoholic neuritis, the correctness of Dr. Spaink's findings is likely to be questioned.

A corkscrew appearance of the nerves in alcoholism is, however, very suggestive, since that interesting and useful spiral instrument plays so large a part etiologically in the disease. Is it possible that Dr. Spaink is a grim joker who has been trifling with the pundits of the American Association for the Study and Cure of Inebriety? One must not forget Dr. Dujardin-Beaumetz and the pigs to which he gave alcohol for two and a-half years without causing serious structural changes anywhere. There were no corkscrews in the pigs.—*Med. Rec.*

MEDICAL CHEMISTRY.

PURE PHOSPHORIC ACID.

M. Nicholas, in *Comtes Rendus*, describes a method of preparation of pure phosphoric acid, in which a known quantity of pure calcium phosphate is gradually added to a slight excess of pure dilute hydrofluoric acid contained in a leaden or platinum vessel, the mixture being well stirred after each addition. An energetic action takes place, and considerable heat is evolved. When all the calcium phosphate has been added, the high temperature of the mixture must be maintained for some time in order to complete the reaction. After the removal by filtration of the calcium fluoride which is formed, the solution of phosphoric acid is evaporated. At the point when the solution commences to become viscid the excess of hydrofluoric acid used is volatilized. The evaporation is continued until a thick syrup, containing 60 to 70 per cent. of phosphoric anhydride, is obtained. Meta and pyro-phosphoric acids may be prepared by further continuing the evaporation and heating. The various calcium salts of phosphoric acid, described by Erlenmeyer, may be readily prepared by adding hydrofluoric acid to a large excess of calcium phosphate, and, after mixing well, dissolving out with warm water the acid salts produced. Impure phosphate, such as bone ash, may be used for the preparation of phosphoric acid, provided that the resultant acid, after being evaporated to carbonize the organic matters present, is diluted with water, filtered, and again evaporated.

HYPNAL.

Hypnal, or monochloral-antipyrine, is prepared, according to Dermandre, as follows:

To a solution of 47 Gm. of chloral in 50 C.c. of distilled water add a solution of 53 Gm. of antipyrine in 50 C.c. of water, and transfer the mixture into a funnel provided with a stopcock (separating funnel). When the mixture has separated into two layers, an upper, aqueous one and a lower, oily one; draw off the two layers separately. After about twenty-four hours the oily layer, will have been converted, almost entirely, into a mass of transparent, rhombic prisms, and a few small crystals will be found in the aqueous portion. The mother liquids having been poured off in both cases, the crystals are collected together and dried, first between blotting paper and afterwards over sulphuric acid.—*Petit Mon. de la Pharm.*

NAPHTHALIN CAMPHOR.

If, says the *Journal de Pharmacie*, naphthalin and a champhor of the laurinaceæ be brought together at a temperature of 35° C., a liquid compound will be formed. This body seems to be a combination of 10 molecules of camphor with 7 molecules of naphthalin. It can be obtained either by melting together in a water-bath 10 ($C_{10}H_{16}O$) with 7 ($C_{10}H_8$), or by melting together an indefinite quantity of the substances, letting the resultant liquid cool to about 30° C., and pouring off the portion that remains liquid at this temperature. This new compound melts at 32.6° C., and remains fluid down to 23°. It sublimes with partial decomposition, and boils at about 207° C. It distills over at this temperature, but decomposes in distillation, the distillate containing less naphthalin than the body submitted to distillation. Exposed to the air the camphor volatilizes little by little, leaving the naphthalin as a residue. It is soluble in those liquids which dissolve the two components, and itself is a good solvent for iodine and gun cotton.

CITRIC ACID AS A NORMAL CONSTITUENT OF MILK.

Th. Henkel has found that citric acid is a normal constituent of cow's milk. Sterilized condensed milk regularly deposits a sediment consisting almost entirely of calcium citrate. In a factory of milk products to which Hendel had access, fresh cow's milk is first "purified" by centrifugal machines, then evaporated to one-third in vacuo, and the condensed product heated in hermetically

sealed tin boxes so as to sterilize it. Upon standing during several days, there are found in the cans concretions or voluminous precipitates which, when the milk is diluted, fall to the bottom. They consist chiefly of calcium citrate mixed with a little casein.—*Zeitsch f. angew. Chem.*, 1891, 503.

Concerning the occurrence of citric acid in milk, A. Scheible has contributed a detailed account in *Landwirthsch Vers.*, 39, 153 (abstracted in *Zeitsch. f. angew. Chem.*, 1891, 503.) This investigator found that cow's milk contains between 1.7 and 2 Gm. in a liter, goat's milk 1 to 1.5 Gm., and human milk about 0.6 Gm. The occurrence of citric acid in milk has heretofore been overlooked. Its isolation is quite a task, the process given by Scheible being quite tedious and circumstantial. It depends in the main upon the fact that a mixture of alcohol and ether in definite proportions will dissolve the citric acid, while it will leave undissolved the other constituents of the serum of milk.

HASTENING THE REACTION BETWEEN HYDROGEN PEROXIDE AND PERMANGANATE.

When a solution of potassium permanganate acidulated with sulphuric acid is made to act upon hydrogen peroxide (dioxide), the reaction is sometimes quite sluggish, though when more permanganate is afterwards added the latter is at once rendered colorless. If, however, the hydrogen peroxide was previously mixed with a little manganous sulphate, the reaction with permanganate will take place fully and at once, at the first contact. It seems that the presence of manganous sulphate—itself one of the first products of the reaction between hydrogen dioxide and permanganate—is necessary for the continuance (or rather commencement) of the reaction. R. Engel, who makes this communication in the *Bulletin de la Soc. chimique*, vol. vi., 17 (*Chem. Centralbl.*, 1891, ii., 338), assumes that permanganate of potassium, when first encountering the manganous sulphate, oxidizes this to manganic sulphate. The latter salt is then decomposed again to manganous sulphate by the hydrogen dioxide.

If the hydrogen dioxide is very pure, and if the sulphuric acid contains neither sulphurous acid nor any nitrose, the reaction permanganate and the dioxide is very slow. Yet, as these conditions of extreme purity are seldom present together, the tardiness of the reaction under those circumstances has not been noticed or understood up to the present time.

News and Miscellany.

THE SOCIETY FOR THE ABOLITION OF THE TITLE OF DOCTOR.

The Society receives help in the following annotation from the *Medical Press and Circular:* "The titular appellation which medical practitioners rejoice in is a relic of antiquity akin to that of the legal wig, and it is curious in that it has survived the levelling tendencies of the present generation. A correspondent raises the question as to whether the practice is an unmixed advantage. It serves to distinguish the doctor from his fellow-men, and although from an advertisement point of view this may not be altogether a drawback, it certainly entails inconveniences of its own. It never occurs to an outsider to start a conversation with a doctor on any but a medical topic, and it is quite open to discussion, a contemporary suggests, whether, if medical men did not differentiate themselves so much, and were content to be like other educated members of the community in title, manners, and personal appearance, it would not be better for themselves both in public and private life." —*Med. Record.*

MALFORMATION OF THE NOSE IN IDIOTS.

M. Revillet (of Cannes): In idiots deviations of the nose to the left has been observed in more than half the cases. The nasal passages are almost always the seat of chronic catarrh. Hypertrophy of the mucous membrane of the septum and that of the turbinated bones is of great frequency, and more remarkable since these affections are relatively rare in men of sound mind. Deviation of the septum from the fact of the narrowing which it produces in one of the nasal fossæ is a very efficient pathogenic cause of hypertrophy of the septum and of the turbinated bones.—*La France Medicale.*

A PIN SWALLOWED PASSES PER URETHRAM.

The following case is reported by Tuttle (*N. Y. Med. Jour.*): K. D., aged five years, while playing with a bent pin in her mouth, suddenly caught her breath and drew the pin into her throat. It lodged in the fauces, but, upon her mother attempting to remove

it, was dislodged and swallowed. This occurred on December 12. Fearing too great peristaltic action with a sharp-pointed foreign body in the alimentary canal, I gave no cathartics, but had the patient fed on food containing a large proportion of excrementitious matter and the stools constantly examined to find the pin if it should pass. Ten days elapsed and, nothing having been seen of it, I had about concluded it had imbedded itself in some of the intestinal folds or been overlooked in the dejections, when the father called to tell me that the child had passed the pin upon urinating that morning. She complained of sharp pain upon making her water, and, looking in the vessel, found the pin somewhat corroded but otherwise just as when she swallowed it.

The passage of the pin through the intestinal wall is not so remarkable as its passage from the bladder after it had once fairly entered that organ. Of course, it is possible the pin may have passed from the rectum through the vagina and not entered the bladder at all, but the child's symptoms indicated irritation of the latter organ.

MEDICAL ALLIANCE TRANSACTIONS.

The transactions of the first annual meeting of the U. S. Medical Practitioners' Protective Alliance have been published and are now ready for distribution to the profession. The volume contains the addresses in full, delivered at the Baltimore meeting, together with the constitution and by-laws and other information. A copy will be mailed to any physician interested who will send stamp to the Secretary, Dr. J. F. Davidson, Glendola, New Jersey.

FIRST SEMI-ANNUAL REPORT OF THE NEW YORK PASTEUR INSTITUTE.

Dr. Paul Gibier, Director of the New York Pasteur Institute, reports the following results of the preventive inoculations against hydrophobia performed at this Institute during the first six months of the second year of its existence (February 18th, 1891, to August 18th, 1891). During this time 415 persons having been bitten by dogs, cats and other animals applied for treatment. These patients may be divided in two categories:

1st. In the case of 345 of these persons it was demonstrated that the animals attacking them were not mad. Consequently the patients were sent back after having had their wounds attended to during the proper length of time.

2. In 70 cases the anti-hydrophobic treatment was applied, hydrophobia of the animals inflicting bites having been evidenced clinically, or by inoculation at the laboratory, and in many cases by the death of some other persons or animals bitten by the same dogs.

Indigents have been treated free of charge.

The persons treated were:

17 from New York.
16 from New Jersey.
11 from Massachusetts.
5 from South Carolina.
5 from Texas.
3 from Connecticut.
2 from Maryland.
2 from Missouri.
1 from Ohio.
1 from North Carolina.
1 from Michigan.
1 from Pennsylvania.
1 from Rhode Island.
1 from Arkansas.
1 from Virginia.
1 from Mexico.
1 from West Indies. (Curaçoa).

DEATHS BY HYDROPHOBIA AFTER TREATMENT:

Miram Adams, 5 years old, of Framingham, Mass, badly bitten July 14th last, in 19 places by a dog, recognized to be mad. Treated from July 15th to August 1st. Symptoms of hydrophobia appeared six days later, (August 6th). Died August 9th.

Three other persons (two, sisters of the patient) and a man, bitten by the same dog, who received the same course of treatment, are now enjoying good health.

This so far, is the only death by hydrophobia out of 255 cases treated at this Institute to date.

BEER-DRINKING AND HEART DISEASE.

It is said (Blätter f. Klin. Hydrotherapie, 1891, No. 4) that disease of the heart is very prevalent in Munich, where the consumption of beer amounts, on the average, to 565 litres per head annually; and in the same place the duration of life among the brewing trade is shorter than that of the general population. Whereas the average age attained among the latter is 53.5 years, that of ale-house keepers is 51.33 years, and of brewers 42.33 years. The same note adds that for the whole of Germany the annual consumption of beer per head amounts to 88 litres, but for Bavaria it is 209 litres.

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Clinical Lecture.

LATENT NEPHRITIS, WITH SUPPRESSION OF URINE, IN CHILDREN.

BY ALEXIS M. LÉON, M. D.,
NEW YORK CITY.

Gentlemen: The case which forms the text for these remarks is unhappily incomplete by reason of the failure to secure its post-mortem aspects. On this account, it has been deemed proper to present our subject, Latent Nephritis, with Suppression of Urine, in Children, in its clinical bearings alone.

The pathological divisions of the different forms of kidney disease are not as clearly defined nor their classification as universally agreed upon as, no doubt, will hereafter be the case. On the one hand, necroscopists hold that no kidney is found healthy in the person of one dying from any acute or chronic disease. On the other, those who denying this broad assertion claim that nephritis is by no means always present in the post-mortem room. Again some authorities speak of but two forms of the acute and two of chronic kidney disease, whereas others sub-divide this classification two or three fold.

This being the status of the subject, it is simply impossible to properly arrange and classify the few cases that are included in this writing or to base any conclusions upon their pathology. The confusion in this regard relating to the most frequent cause of nephritis in children, that complicating scarlatina, makes this strikingly manifest. Almost without exception, writers speak of scarlatinal nephritis as a simple entity whereas there are certainly two forms of the disease. Niemeyer[1] states that acute croupous nephritis and parenchymatous degeneration of the kidneys both complicate scarlet fever. Delafield[1] says "most cases of scarlatina are complicated either by acute parenchymatous or diffuse nephritis," and so others distinctly assert the existence of more than one form of kidney complication in scarlet fever.

In connection with the recitation of the subjoined case it might be well to glance at the distinctive features of nephritis in children and in this way, perhaps, demonstrate certain of the peculiarities of the latent affection in these subjects.

What, then, are the differences, if any, between nephritis in adults and in children? They exist, it is believed: 1st, in the relations of the etiology to the disease; 2nd, in the relations of the distinct character of the group of symptoms to the disease; 3rd, in the relations of the prognosis to the disease; and 4th, in the relations of the acute and chronic forms of the disease. With regard to the etiology of the first, in adults, nephritis is due in the vast majority of cases to direct exposure to cold, damp or wet; less frequently it complicates certain infectious diseases, and in other instances it is caused by pregnancy.

According to Niemeyer[2] croupous nephritis, the form that is companion to the zymotic diseases, etc., is the one most frequently observed in children. Of the parenchymatous nephritis he observes: "chief among the pre-disposing causes is the temporary, and in a still greater degree, the continual exposure of the skin to the effect of cold and moisture." And of this form he speaks of its frequency of occurrence "far less in childhood than in more advanced life." In childhood, kidney disease is the result, almost always, of some zymotic disease, in the great majority of cases, scarlet fever; and is very rarely of idiopathic origin—so rarely, indeed, that in many of the text books on Children's Diseases no special mention is made of nephritis except as complicating

[1] Practice of Medicine.

[1] Pepper's System of Medicine.

[2] Loco citato.

one or another zymotic diseases. West[1] says that three-fourths of the cases of nephritis in children occurs after scarlet fever[2].

Tanner & Meadows[3] declare that probably nine-tenths of the cases of nephritis are due to scarlet fever, and further states that "acute idiopathic inflammation of the kidneys is undoubtedly a very rare affection in childhood . . . . . We cannot call to mind a single instance within our own observation." Day[4] quotes from Dickinson (at Children's Hospital) a series of 103 cases in which 75 were due to scarlet fever and but 5 to exposure to cold[5].

Rilliet & Bartley[6] cite 416 cases of nephritis in children, 364 of which were secondary and 56 primary or 13.4 per cent. Of these 13 per cent. some were caused by poison, copaiba, cubebs, turpentine, squills, iodine and above all cantharides.

Bonchut (Maladies de Noveau Nés) also states of nephritis of childhood, that it is "very rarely it occurs primarily, but I have seen examples." Thus we infer that nephritis in adults in most cases being due to exposure, it differs in this respect from this disease in children which is seen, in the great majority of instances, to occur as a complication to some zymotic disease.

The symptoms of nephritis in children are more pronounced and less variable than those of the nephritis of adults. In fully one-half the cases in adults the access of the disease is insidious or disguised so that it sometimes is not recognized until coma or a convulsion makes its appearance.

[1] Diseases of Children.

[2] He refers to 120 cases (those complicated by diphtheria not included).

	85	succeeded to	Scarlatina.
	1	"	" Measles.
	3	"	" Typhoid Fever.
	1	"	" Acute Rheumatism.
	1	"	" Ague.
	2	"	" Empyema.
	1	"	" Pyæmia.
	2	"	" Pneumonia.
	1	"	" The application of a blister.
In	14	was	Acute and idiopathic.
"	9	"	Chronic and idiopathic.
	120		

[3] Diseases of Infancy and Childhood.

[4] Diseases of Children.

[5]

	75	due to	Scarlet Fever.
	3	"	" Measles.
	1	"	" Erysipelas.
	1	"	" Acute Rheumatism.
	1	"	" Eczema.
	5	"	" Exposure to cold.
	17	from uncertain causes.	
	103		

[6] Maladies des Enfants, 1887.

Mahomed[1] in discussing 100 cases of granular kidneys says that "only 26 per cent. of these cases presented the ordinary symptoms of Bright's disease, such as would have led to their disguises during life." William Carson[2] cites several cases of latent kidney disease in persons of advantages and education (one a physician) whose symptoms were so slight that they did not merit attention until suppression or uræmia set in. M. Debore[3] reports three cases of sudden death in old people aged respectively 70, 77 and 66 years, the subjects of interstitial nephritis (and cardiac hypertrophy) who, during life, exhibited no symptoms whatever, and with the exception of a slight dyspnœa for a few hours in the third case, gave no pressage of impending dissolution.

McBride[4] goes further and lays down a combination of symptoms, which when in sufficient accord announce the existence of renal disease before the more diagnostic signs or the urinary changes appear[5]. In corroboration he gives the histories of six such cases (adults) and adds that he has at least six more "now under observation and in which although the symptoms and signs usually considered as diagnostic of the small kidney have not thus far declared themselves, yet I feel very positive that before long they will be found to be present."

In the nephritis of children œdema or anasarca is almost always present (at least in those cases where the disease is severe enough to run a more than transitory course) together with fever, at the outset, vomiting anorexia and the changes in the urine.

Every practitioner can testify to the proportionate frequency of such a case as this in persons of middle life and beyond. He is called to see a patient who can give no distinct history of previous illness, though perhaps has complained of odd pains and bad feelings for some months before. The patient after an exposure has been attacked by an acute pleurisy or bronchitis. After treatment for a week, the fever has disap-

[1] London Lancet, 1879, page 162.

[2] Cincinnati Lancet and Clinic, 1883, X, page 62.

[3] L'Union Médicale, 1880, XXX, page 726.

[4] Transactions N. Y. Academy of Medicine, 1883, III.

[5] These are: (*a*) Persistent high Sp. Gr. of urine.
(*b*) Frequent presence of large crystals of uric acid and more occasionally Oxalate of Lime.
(*c*) Persistent high arterial tension.
(*d*) Beginning hypertrophy of Left Ventricle.
(*e*) Murmurs due to high arterial tension, or arteritis deformans.
(*f*) Endarteritis Chronica.

peared, the pain in the side or cough subsided but still the patient is worse instead of better than he was the first day of his sickness. There is, no doubt, headache, complete anorexia, perhaps vomiting, perhaps diarrhœa, he cannot sleep and feels feeble and confused. His pulse is probably slow and hard, his temperature but little elevated. At once the doctor's attention is called to the urine which, as expected, might be found scanty and containing albumen and casts.

But such a picture is an unusual one in children. In the chronic forms of the diseases, the nephritis, if not a continuation of an acute attack is almost always associated with and dependent upon an hypertrophied heart[1]. And as these cases often remain dormant for months and perhaps years, the renal affection may be supposed to be not yet fully established; but when once established, the characteristic complexion, the pale mucous membranes, the bad health, and the œdema (which will probably be found, to a greater or less extent) make the disease sufficiently manifest to avoid confounding it with any other malady.

In the acute forms in children—in the great body of cases that follow or accompany scarlatina or diphtheria, it is not of infrequent occurrence, where even from day to day the urine is examined, to note the access or exacerbation of fever and even puffiness of the eyelids and face before the albumen is manifest in the urine. (And, indeed, in some cases the œdema and other symptoms may exist without any changes in the urine being appreciable).

The converse of this state of things is also true, and is of more frequent occurrence, namely, the presence of albumen in the urine without any general symptoms of nephritis. There are those who claim it may be thus found from the altered character of the blood, without renal disease and others, that it is due to a mild form of parenchymatous degeneration (or inflammation) of the kidney.

In childhood's nephritis when of sufficient severity to produce marked and characteristic symptoms in the patient, almost all authorities agree in the statement that dropsy is a symptom rarely absent. "The beginning of kidney complications (in scarlatina)," says Dr. Eustace Smith[2], "is generally announced by vomiting, headache, loss of appetite, a dry skin and pallid complexion, an irregular pulse and a rise in temperature." Then œdema, etc., "in a certain proportion of cases, uræmic symptoms occur." He makes no mention of latent cases with severe terminations.

Bartels[1] states that dropsy is "a symptom which is scarcely ever absent in the severer cases of acute parenchymatous nephritis, although very often absent in the milder cases."

Henoch[2] says that in the majority of cases there occurs œdema, more or less. Vogel[3] declares the rule to be that "in nephritis after scarlet fever, anasarca and effusion of serum into serous cavities take place."

J. H. Ripley[4] places himself in accord with the above statements and says that "dropsy is one of the earliest and most constant symptoms of scarlatinal nephritis." And these conclusions are further established by the fact that the current medical literature while attesting to the frequent occurrence of kidney disease with latent symptoms in adults most positively attests to the infrequency of this condition in children.

3rd. With regard to the prognosis the gravity of which in nephritis of adults and its favorable character in children is a subject of such frequent observation that the reference to the following collection of cases of death from kidney disease may dismiss the question. Roberts[5] gives the total number of deaths from kidney disease during one year in England as 3342—of these but 143 (4.2 per cent.) were under 5 years of age and 294 (8.7 per cent.) were under 15 years of age.

4th. The infrequency of chronic nephritis in children and its corresponding frequency in adults is also of daily clinical observation. Flint[6] says that chronic Bright's disease "occurs very rarely in infancy and childhood" and gives a table of 52 cases, not one under the age of 10 years. All authorities are necessarily of accord on this subject and further quotation is superfluous.

The bearings of the etiology, the distinctness of symptoms, the prognosis and the acute or chronic character of the disease on nephritis in children, in reality, seem to depend on the very fact that this disease occurs in the young almost always as a complication to a zymotic disease. It is, therefore, acute; and it presents, very

[1] Day, loc. cit.

[2] Diseases of Children.

[1] Liemssen's Encyclopedia.

[2] Lectures on Diseases of Children.

[3] Diseases of Children.

[4] Medical Record, April 28, 1883.

[5] Reynold's System of Medicine.

[6] loc. cit. p. 772.

generally, distinct signs at its access and can be accorded a favorable prognosis.

With this view accepted, the conclusion at once appears that latent nephritis with suppression of urine is a rare occurrence in children.

Our own experience, the authority of the text books and the clinical records prove the truth of this proposition. And perhaps the truest means of proof is the knowledge of the fact that so few cases have been reported in medical literature during the past few years; whereas, less interesting and unusual cases of fondroyant symptoms in adults, the subjects of a nephritis which did not previously manifest itself, and cases of sudden suppression of urine due to different causes are of frequent citation in the journals. This is clearly shown, and as well the comparative infrequency of suppression in children in the very elaborate monograph of Dr. E. P. Fowler,[1] in which he describes 93 cases of complete anuria of long duration. Of these, 15 altogether were under the age of 20 years. And of these, 2 were due to valvular occlusion of ureter; they were marked by distinct symptoms. Three cases occurred with corrosive sublimate poisoning. One followed measles and gave no symptoms, and recovered. Six were the result of scarlet fever; the oldest of these was 15 years of age. In the reports, three of these cases mentioned no symptoms. In one there was but headache; in another but vomiting; and the other presented vomiting, headache, coma, etc. Three were due to uncertain causes; one, with distinct symptoms; one, not stated; even the termination of the case not given; and the other gave no symptoms at all. Hence, in these 93 cases of suppression of urine collected through the journals (issued during a period of 100 years), but seven were possibly instances of latent nephritis in children.

Now, in speaking of latent nephritis, it should be borne in mind that these cases do not constitute a separate form or variety of kidney inflammation, they simply present an aspect of the disease. An aspect which will be found to be identified by a certain constant symptomatic group, the gravity of these symptoms and the often fatal termination of the case. But, it is indeed a fact, that one of several pathological conditions may be the cause.

Latent nephritis, with suppression of urine might be defined as an existing nephritis giving no symptoms, or none that are distinctive of kidney disease until partial or complete suppression of urine sets in.

Flint[1] refers to these cases when he says "coma and convulsions may occur as sequels of scarlatina, due to uræmia taking place, without either albuminuria or dropsy" —and speaks of such cases in which even the scarlatinous rash is wanting. Henoch[2] calls attention to the fact that these cases often deceive the attending physician, for without warning, in many instances, "the scene is opened by complete anuria."

The cases found to have been reported or referred to during the past ten years and my own case may form the ground for further conclusions; be these of greater or less importance, there is still no doubt that the recitation of these cases may prove instructive in many ways.

William G——, U. S., aged 4 years, and 6 months. Family history: father and mother both alive and healthy. Patient an only child.

Previous history: had always been healthy and was particularly bright and intelligent for his age. Had never any sickness, or any of childhood's diseases. Condition: fair complexion, well nourished and stout. Present history: saw the patient August 15, 1887. Three to four weeks previously he had complained of ill-feeling and slight sore throat, and was noticed to have some fever, which symptoms subsiding next day, no physician was called at this time. Recovery was apparently complete; the child played about and seemed as well as ever. About two weeks after, or a little over a week before the patient came under my observation he scratched his hand posteriorly at a situation between the metacarpal bones of thumb and forefinger, near the margin of the web, with a tin toy; and the following day while sailing a toy boat in the bath tub, had washed off some of the red paint from the boat on to his hand. He complained of pain and smarting in the scratch. The mother took the boy to a druggist, who gave a carbolic acid wash of fair strength, to be used as a lotion. The following day the pain grew worse, and about the scratch the skin looked red and swollen, and the dorsum of the hand beginning to swell, a physician was consulted. A mild lotion was ordered. But from day to

[1] "Suppression of Urine, etc."—a paper presented to N. Y. Medico-Chirurgical Soc., Dec. 14, 1881.—W. Wood & Co., N. Y.

[1] loc. cit.

[2] loc. cit.

day the swelling, pain and redness increased; and in three or four days a pimple was noticed under the chin. The next day the skin in this location grew red and the cellular tissue tumified, and then papules with pustular apices appeared. No fever was noticed. The boy's spirits remained bright and his appetite good. The swelling of face and particularly of the hand further increasing, the attending physician made an exploratory puncture at the seat of the first injury—only blood escaped. The Doctor then making known to the family his intention to lay open the hand by a free incision the following day, they grew alarmed and I was called in to take charge of the case.

On examination, August 15th, I found the patient in good general condition—appetite good, pulse 80 and strong, temperature normal. Heart, lungs, liver and spleen showed no signs of disease. Throat not inflamed. Tongue coated. The appearance and quantity of urine said to be normal—it was not examined. The dorsum of the hand was red and puffed and like a cushion; the skin quite tense and shining. The point of the incision of the day before was dark looking, from a few drops of clotted blood at the cut; no pus could be squeezed out at this point. No fluctuation at all in the hand, but the tissues had a doughy feel and pitted on pressure. The swelling terminated at the knuckles below, and at the posterior annular ligament above. Lymphatics could not be traced up the arm; glands in axilla not swollen. Under the chin the skin was red and shining and greatly puffed. Several small pustules were secreting a thin ichorous matter. The submaxillary glands on both sides greatly enlarged. The situation of the swelling and redness began about half an inch above the inferior edge of the lower maxilla and terminated at the situation of the ponum adami; it extended across from the angles of the jaws on either side. It was located about in the middle line. Iron-tincture of the chloride was given in large doses and poultices, first of flaxseed alone, later with yeast added, were applied to the hand and neck.

For the two following days the patient's condition slightly improved, appetite remained fair and the bowels were moved rather frequently, the motions being watery, dark and bad smelling. The swelling in the hand subsided almost entirely and that about the neck, considerably.

Aug. 18th.—It was now noticed that notwithstanding the diminution of the local symptoms the patient did not continue to improve. He grew sleepy and apathetic; eyes looked dull, though the pupils responded readily enough to light; and he complained and cried when aroused—though when once aroused he might remain bright for half an hour or more. He was profoundly anæmic. The pulse was strong and full and hard and 52; temperature, normal. The condition of the bowels remained unchanged. The urine was asked for.

Aug. 19th.—The patient's general condition, the same. Stupor, slow pulse and normal temperature remain. The bowels moved about four times during the day. The small pustules on the face had now grown to be openings in the skin, each the size of a millet seed and were secreting pus copiously. They gave the skin a worm-eaten appearance, such as is seen in carbuncle—but they did not penetrate into the cellular tissue and no pus could be *squeezed* from any of them. It appeared as if the surface was suffering from rapid molecular disintegration. The hand had returned to its natural size. The site of the incision was black (gangrenous) to the extent of about one fourth of an inch in diameter. No exudation, whatever, from it. In the centre of the dorsum was a dark blue spot that did not disappear on pressure. Sensation in the hand remained. No urine had been passed since the day before; indeed, the family could not well recollect when the urine had last been voided. It was supposed possible that some had passed at the time the bowels moved, though the motions were now not watery, but were rather of pasty consistency. The family were instructed to collect urine in a separate vessel. The treatment was now directed toward establishing the flow of urine, cups and poultices to the back, morphine; nitre and digitalis, internally.

Aug. 20th.—The patient more somnolent and apathetic, skin moist, pupils small, appetite lost, has vomited; the bowels move about every five hours; no urine has been voided, pulse still from 50 to 56 and hard; temperature 98½. Local symptoms at neck and hand remain the same. The efforts towards establishing the functions of the kidneys were persevered in. There had been noticed slight twitching about the face and increasing stupor. Still no urine passed. Was seen about 11 P. M. The bladder, by percussion and palpation, found empty. Efforts to pass a catheter were unproductive owing to improper instruments; and while these efforts were persevered in, the boy

screamed and tossed and fought. He worked himself into a perfect frenzy of passion.

The patient was now noticed to be extremely pale, and bathed in a profuse perspiration and the pulse, which ten minutes before was 54 and hard, was now about 200—hardly countable and feeble. He was in a condition of collapse. Brandy and ammonia, etc., were assiduously given by the mouth and hypodermatically and heat applied to the surface of the body, but all with no effect on his condition.

Convulsions supervened and frequently occurred with varying intensity until 4.30, A. M., August 21st, when death closed the scene.

Very unfortunately an autopsy was impracticable, and much was lost that might prove valuable and important. For instance, (1) the identity of the kidney affection, (2) its probable duration, (3), and most important, the relation, if any, existing between the cellulitis and the suppression of urine. It can be conjectured only, therefore, what these relations were.

First, it is possible the kidneys were affected as a complication of the inflammation and poisoning (?) of the hand, perhaps to the extent of a suppurative nephritis (surgical kidney).

Second, the kidneys may have been primarily affected with a form of acute idiopathic inflammation, and the cellulitis supervening and taking on its extensions and grave character from the blood poisoning in consequence of the inactive renal functions. Or, thirdly, the child may have suffered from a light form of diphtheria or scarlatina, (probably the latter), at the time of the slight indisposition that occurred two weeks or so before the child became markedly ill, and that a complicating nephritis succeeded, and that the trifling injury was magnified by the disordered condition of the blood, in consequence of the nephritis.

This sequence of affairs seems to me the most probable for these reasons: the child evidently died directly from suppression of urine due to some kidney disease, and the alarming symptoms of the last few days of his life were due to uræmia.

It is hardly possible, therefore, and not at all likely that the nephritis occurred as a complication to the cellulitis, since a suppurative nephritis or any form of inflammation of the kidney would hardly have had time to develop and kill in the few days since the time the symptoms of the cellulitis became marked enough to cause systemic disturbance to the end. Certainly it could not have been a suppurative nephritis. That there was some blood dyscrasia is also evident; but there was no apparent poison introduced into the system, as far as can be judged—positively none through the wound in the hand. The causes and the nature of the cellulitis, as it first appeared, testify to that. Is it not more likely, therefore, that this dyscrasia was the result of an ante-dating nephritis?

And though there is no positive evidence that the child suffered from any infectious disease, yet the rarity of idiopathic nephritis in children and the many occasions when (especially) scarlet fever have been overlooked and not diagnosed until its complications or its contagion made it manifest, would make it appear more likely that the nephritis was due to some such cause. However, and unfortunately, both the cause and nature of the kidney affection must remain problematical.

Search through the medical literature for the past ten years shows but few cases of latent nephritis in children, as has been before stated.

For the sake of brevity these have been arranged in tabular form, giving name of reporter, where published, sex and age of the patient, the duration of the anuria and its degree, previous symptoms, if any, of nephritis; and whether œdema was at any time present; cause of nephritis; termination of the case and the results of autopsy, if performed.

It is not believed that in ten years other such cases have not occurred. First of all the condition described is not of such marked definition that one would feel disposed to always report his case. Perhaps in some the true affection is overlooked and the death certificates are written convulsions, or some are looked upon simply as a sad and sudden termination of scarlatina. But the fact remains, these cases are rare.

Rehearsing the characteristic features of the cases in the above table and comparing them, it will be seen that the majority of the cases were males (as in all forms of nephritis); only one girl appearing in the list, and in three, sex not stated. The average age is about 6 years. The youngest 1 year the oldest 17. The few cases of nephritis reported in infants at the breast seem to have been characterized chiefly and in some instances solely by œdema. Bouchut[1] cites two cases for the purpose of proving this

[1] loc. cit.

CASES OF LATENT NEPHRITIS, WITH ANURIA, IN CHILDREN.

Reporter.	Sex.	Age.	Anuria.	Duration.	Previous Symptoms of Nephritis.	Oedema.	Cause.	Termination.	Autopsy.	Publication.
Henoch.....	—	9 Yrs.	Complete	7 Days	None	None	Scarlatinal	Death	Not stated	Lectures on Diseases of Children.
Meigs & Pepper.	M	1 yr.	Not stated	32 hrs.	?	None	Scarlatinal	Death	Not stated	Diseases of Children.
Meigs & Pepper.	—	1½ yrs.	Not stated	35 hrs.	None	None	Scarlatinal	Death	Not stated	Diseases of Children.
L. R. Stone.....	M	1¾ yrs.	Complete	Twice 4 dys	None	None	Doubtful, possibly zymotic	Death	Ac. diffuse nephritis	Boston Med. and Surg. Jour. Vol. CIX. p. 221.
H. E. Paxton....	M	6 yrs.	Complete	5 dys.	None	None	Possibly obstructive	Recovery	——— ———	Lancet, September 29th, '83.
A. Semple.....	F	2½ yrs.	Partial	40 hrs.	None	Slight	Doubtful, possibly zymotic	Death	Congestion of kidney	Med. Press & Circular, Vol. XXXVII, p. 24.
Wm. Lee.....	M	14 yrs.	Partial	Not stated	None	None	Doubtful, possibly idiopathic	Recovery	——— ———	Maryland Med. Jour. Vol. X, p. 876.
G. F. Bates.....	M	4 yrs.	Partial	9 dys.	None	None	Scarlatinal	Death	Suppurative N.	Med. Record, Vol. XVIII, p. 431.
J. H. Ripley....	M	4½ yrs.	Complete	30 hrs.	None	None	Scarlatinal	Recovery	——— ———	Med. Record, April, 1883.
J. L. Smith.....	—	6 yrs.	Par. then Com.	4 dys.	None	None	Diphtheritic	Death	None	Not published.
A. M. Léon.....	M	4½ yrs.	Complete	3 dys.	None	None	Doubtful, possibly zymotic	Death	None	Herein reported.

disease *can* occur during infancy. J. M. Booth[1] reports a case, 3 months of age, and J. R. Morrison[2] mentions two such cases aged respectively 3½ and 5 months; in all œdema was the chief and marked symptom.

In one half the cases the anuria was complete, in the rest partial and not stated.

None gave distinct evidence of nephritis before the suppression occurred. The nephritic symptoms usually appeared simultaneously with the anuria.

In those instances where the suppression was not absolute these symptoms developed gradually and insidiously, so that it would be difficult to date their exact beginning.

Bnt whether insidious or absent, in all the early prominent and only diagnostic sign of the renal disease was the anuria[3]

In but three cases are the post-mortem appearances given; these presented as many forms of kidney inflammation, namely, acute diffuse nephritis, conjestion of kidney and suppurative nephritis.

Henod[4] speaks also of a case of hæmorrhagic scarlatinal nephritis, which presented no symptoms during life. That cases of albuminuria in the course of zymotic diseases may occur without actual kidney lesion has been referred to. But cases of this description have been reported as of parasitic origin, as well. Among others, Gancher[5] broadly concludes that "diphtheritic nephritis is a parasitic nephritis." He gives a fatal case which presented the same bacteria (lesser number) in the blood as in the urine.

The forms of nephritis in the cases without post-mortem history are unknown, but they are probably not identical.

Particular attention is called to the fact; that these cases, with one exception, did not present that commonest of symptoms of kidney implication in children—œdema; not even after the suppression had set in, and

[1] British Med. Journal, 1881, II. p 626,

[2] British Med. Journal, 1881, II. p. 777.

[3] Instances are referred to by several authors where the first sign of scarlatina or diptheria is the nephritis. Others go, as Prof. M. R. Levi, (in Lo Sperimentale, 1885, Nov.), who relates two cases, brother and sister, aged 5 and 8 years, who were brought to him at the Children's Clinic, with nephritis (with anasarca), the first signs of diphtheria that appeared in them; a brother dying of this disease shortly before. Levi claims that the first symptoms of the Diphtheria was the kidney disease, and makes proof of his views, that there can exist a "Diphteritis sine Diphtera," as well as a scarlatina without eruption.

[4] loca citato.

[5] Before the Société de Biologie, in Gaz. Med. de Paris, 1881.

that of these cases, five were of scarlatina origin, one diphtheritic, three doubtful and possibly zymotic, one probably obstructive, and one idiopathic; and, finally, that there were but three recoveries; the obstructive case, the idiopathic case, and one Scarlatina case. The suppression in the first lasted five days, its duration in the second is not stated, and in the third was 30 hours. Dr. Ripley in the report of his case[1], remarks that it is the only instance of prolonged anuria in scarlatina or diphtheria he has seen recover. This viewis attested to by West[2], Bartels[3], Thomas[4] and others.

The following general conclusions are therefore presented:

1st.—Latent nephritis, with suppression of urine, is a rare affection in childhood, not so in after life.

2d.—It occurs usually as a complication of some zymotic disease, chiefly scarlatina, (as in all nephritis of children).

3d.—In these cases of scarlet fever it appears, usually, from the end of the second to the end of the third week[4].

4th.—It is sometimes impossible to foresee the nephritis—such symptoms as somnolence alternating wiih restlessness, slow pulse, vomiting, diarrhœa, headache and anæmia should always direct attention to the kidneys. But rarely these signs do not occur until after the suppression has set in.

5th.—Contrary to the rule in kidney disease in children, œdema must not be looked for in some cases, either before or after the anuria develops.

6th.—It is known anuria may exist with complete euphonia for several hours, perhaps for days.

7th.—No particular pathological variety of nephritis occurs in these latent cases.

8th.—The prognosis is bad—about three-fourths of the cases die.

The largest quantity of liquid oxygen ever produced was two hundred grams. Yet a certain Paris newspaper finds it expedient to recommend that everybody taking out fire insurance policies, should be obliged to notify the company if there be any liquid oxygen kept on the premises, owing to its dangerous combustion-supporting properties!

[1]Med. Record. April, 1883.

[2]loc. cit. ([3]), loc. cit.

[3]Ziemssen's Encyclopedia.

[4]Delafield (loc. cit.) remarks that "kidney symptoms may develop from the very first day to the end of the ninth week—that the largest number of cases develop symptoms on the 14th, the next largest on the 21st, and the next to this on the 7th day. (Tripe).

COMMUNICATIONS.

THE OPERATIVE TREATMENT OF APPENDICITIS.*

BY THOMAS S. K. MORTON, M. D.

Since being requested by the directors a few days since to open the discussion of the operative treatment of appendicitis, I have taken a glance through the literature of the subject in order to offer, as it were, a concensus of opinion regarding the present status of the subject, as well as to draw conclusions from such personal experience as has fallen to my lot in this direction. Now I find myself embarrassed by the necessity of limiting my remarks to the few moments which are at my disposal and to crowd into them even bare mention of the most salient facts. Hence much must be entirely omitted and other points given scant attention.

The discussion being limited to operative treatment, pathology and diagnosis—perhaps the most interesting branches of the subject even to surgeons—are not to be touched upon, except incidentally. But I cannot refrain in passing from saying that as the ratio of appendicular to cæcal inflammatory affections is probably 100 to 1, hence that *differential* diagnosis in diseases of this region, which is usually impossible prior to surgical interference, is neither necessary nor important, as operative procedures up to the point of establishing diagnosis are identical for all affections of the cæcal region. Again, I would condemn without qualification needle explorations, as an aid to diagnosis. The procedure is inherently dangerous, and will furnish no indication that cannot otherwise be obtained.

The number of cases of appendicular disease discovered when we are upon the outlook for them is astonishing. A large proportion of peritonitis cases in males, and especially in children, arise from this disorder; and in all cases presenting abdominal pain, whether acute, chronic, or recurring, no matter where referred, we should think of and examine for possible appendicitis. I have come to be very skeptical of such conditions as are described as abdominal "cramps," "colic," etc., particularly when of frequent recurrence. Curious as it may appear, yet it is a fact that the great majority of the profession are only now beginning to recognize cases of appendicitis and its

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consequences as such. Formerly the affection was almost universally diagnosed as anyelse except itself. But just in proportion as the disease continues to be more certainly recognized, so surgeons are more early operating upon cases which demand interference, and, as a consequence, the mortality from the disease, as well as from the operation, is very rapidly on the decline.

Keen has said that, "the first indication in appendicitis is to call a surgeon," that the physician, who almost invariably first sees the case, and the surgeon may together watch the case, and if operation becomes necessary, interference may be prompt and well timed; while the surgeon will have the great advantage of being already familiar with the case and not disposed to delay the operation that he may acquire such familiarity. Again Mynter has well said that "we are utterly unable to judge correctly from symptoms alone of the extent and severity of appendix lesions, and for this reason alone abdominal section is and must be the safest method of treatment" in many cases.

When shall we operate? Judging from the cases that I have observed and from the writings of others, I would formulate as a good working rule: to operate not later than the third day of disease, if the patient up to that time has failed to markedly improve under rest, restricted diet, purgation, and topical applications. Especially should this rule be adhered to in cases where we have failed to move the bowels—these are apt to be the fatal ones. Further than this, we should invariably operate as soon as the presence of pus is assured; when peritonitis is developing or spreading; when signs of sudden rupture of an abscess into the peritoneal cavity appear; and where septicæmia from septic absorption is taking place. In children operation must often be performed earlier than in adults, as with them the malady is more speedy in development, more fatal in tendency, and shows a greater proclivity to involve the general peritoneum.

But let me emphasize the point that *pain* is not a reliable symptom (especially when opiates have been administered) from which to judge as to whether the patient is better or worse; most weight should be given to the strength, temperature and condition of the bowels, stomach and general abdomen.

Mr. Treves urges that operation shall not be done until the fifth or sixth day, or later. But from my reading and experience I think this is too late. He argues thus because few deaths occur before the fourth or sixth day. These cases, however, really begin to die, the third, fourth, or fifth day, although death may not actually take place before the sixth day, or later, when the possibility of benefit from operation has passed. If the case is progressing well and operation is being postponed it should be watched and observed frequently and most carefully. For we cannot predict at what moment an appendix abscess may perforate into the peritoneum or other dangerous complication arise that will instantly demand operation.

If the case is operated upon early the chances of recovery, as a rule, are exceedingly good. The mortality of appendicitis during the first forty-eight hours is almost *nil*, and the operative death-rate at that time is equally low. Later both rates increase, but the former much more rapidly than the latter. The patient, in this disease, is generally strong and well up to the moment of seizure, at which time the danger of operation *per se*, is at the minimum. Such mortality as results in operations for appendicitis, has been mainly incident to undue delay. When physicians and surgeons generally have learned definitely to recognize such cases as are operative at a time before the vital forces have been too much sapped or dangerous complications have arisen, then will the mortality rate of both disease and operation remain steadily at a low figure.

Then again the local conditions from an operative standpoint are much less serious in the early stages. We have at first simply a swollen appendix with infiltration and perhaps a few adhesions. We then do not have to deal with fœtid abscess, foul surroundings, and sloughing tissues which may have given rise to intestinal gangrene and other complications, as well as to the impossibility of securing primary union of the wound. Hernia is more common as a sequel in cases where the operation is performed late and where the surroundings are gangrenous, and we can only secure healing by secondary intent.

The cry of every writer is for earlier operations. I have found no surgeon who regrets having operated early, but almost all mourn cases that were operated upon too late. No case appears where a mistake in diagnosis has been made, despite the awful array of affections which has been drawn up as liable to render uncertain the recognition of appendicitis. On the other hand very many cases opened with the expectation of finding other disorders have proved to be appendicitis.

Who shall operate? The operation for appendicitis may prove to be the most easy;

but it is never trivial, often trying and sometimes even baffling the skill of the very best abdominal surgeons. Hence he who undertakes operation for the removal of the appendix for disease should be equal to dealing with any of the complications and emergencies of abdominal surgery. There is scarcely a complication which occurs in abdominal disease that may not be met with in operations upon the appendix. If a man knows only how to reach the appendix it is not enough, he must be able to cope with any accident or emergency that may arise. Therefore he must have had training in general abdominal surgery.

How shall we operate? There are two classes of cases to be dealt with. One, the acute, where there is perhaps abscess, perforation or general peritonitis; and, second, those where operation is undertaken in the interval between acute attacks as a prophylactic measure. The indications for the latter will be considered separately further on.

The preparations for the operation are usually of a hurried nature on account of the active nature of the disease and the sudden determination that operation has become imperative. Previous purgation, if successful, will make the chances of recovery much more bright, no matter during what stage of the disease operation is performed. Cases where the bowels have been kept open from the outset of attack are always most favorable. Locally the abdomen should be cleansed as for any other operation.

All writers now agree that the incision should be lateral. Median incision is only permissible when diagnosis from other abdominal disease is not clearly made out, as where we have had suddenly developed, violent peritonitis arise without obvious cause. Even should the median incision have been made and the affection prove to be appendicitis, especially if septic, a lateral incision should still be resorted to, for it is exceedingly difficult and dangerous to drain septic appendicitis cases through a median incision, and often it is impossible to deal with complications, or with the appendix itself, except by the more direct route. I am of the opinion that almost any complication arising from appendix or cæcal disease can best be dealt with through the lateral incision. No writer has regretted making the lateral incision, although many have regretted entering through the linea alba.

This incision should be about three or four inches in length and terminate one inch and a half above Poupart's ligament. It should be carried down to its full extent through the right linea semilunaris until the peritoneum is reached, avoiding if possible the epigastric artery which normally would be situated at the inner side of the lower extremity of the wound. I have seen serious secondary hæmorrhage from division of this artery. Having reached the peritoneum, if one does not at once get into an abscess cavity we must exercise great caution not to open the gut by mistake. Sometimes adhesions will be found binding intestine to the peritoneum in the line of incision, and in these cases it is will to go at once to the lower or upper extremity of the wound, get into the general peritoneal cavity and work upward or downward, as the case may be, to the cæcum, when all adhesions can be separated by the finger or knife and the peritoneum opened to the full extent of the external incision. Of course the incision should be increased in size if there is any difficulty in getting into the peritoneal cavity, or subsequently if difficulty arises in any manipulation from lack of working room. But as a rule the smaller the incision the better, because of the less risk of subsequent hernia. The head of the colon is then sought out. If now it is found difficult to determine the site of the appendix, the longitudinal muscular bands of the colon may readily be followed down to their termination in the root of the appendix. Then by careful manipulation one can usually trace the appendix, even through a mass of dense adhesions, and dissect it out. As a rule, in acute cases the organ will be found more or less free in the cavity of an abscess with its tip perhaps adherent to omentum or bowel. The appendix is to be dissected out with the finger, and often we do not see it until it is brought out of the wound ready to be ligated off. This manipulation closely corresponds to the modern one of removing the uterine appendages.

Now, what shall be done if the appendix is found to be bound down by a dense mass of adhesions, and if it would take a long dissection and endanger life from the time required to complete the operation? Under these circumstances I would advise that the appendix be left alone rather than run any great risk of the patient's life to complete an ideal operation. We are often compelled to operate to save life, and that alone, even if we do run the risk (as of leaving the appendix) of recurrence. I do not regard the operation as complete in any case unless the appendix is removed, and we should never

hesitate to dissect out or remove the organ simply for fear of opening up the general peritoneal cavity.

Cases of recurrence of with great violence of symptoms are upon record where operation had been performed and the appendix not removed. Here, again, we have a parallel with the removal of the uterine appendages. Who considers that he has done a complete operation when he simply drains a pyo-salpinx? yet there is a small (but constantly decreasing) proportion of these cases that must be so treated rather than endanger life by prolonging operation, shock, and anæsthesia.

If the appendix can be excised, the question arises as to how we shall deal with it after separating all adhesions. In septic cases it will be found usually impossible to invaginate the stump, after cutting away the appendix, into the cavity of the cæcum and approximate peritoneum over the remaining opening. Where we operate between attacks the appendix, as a rule, can be dealt with in this manner and the investigated stump retained by a few Lembert sutures approximating the surfaces of the cæcum over the aperture. When, however, the organ and its surroundings are swollen and gangrenous the conditions are such that it is generally impossible to investigate the stump. It has seemed quite sufficient in these septic cases to ligate the appendix a quarter of an inch from its root with strong silk, and then cut off both the appendix and the ligature ends. But ligatures will neither become absorbed nor encapsulated where septic conditions are present, and I have seen the threads coming out of the wounds months afterward from a persisting sinus, or by ulceration. So it occurred to me that we might resort to the old surgical procedure of leaving one end of the ligature hang out of the wound. That experiment I am now trying in a recent case. Chronic ligature sinuses assist in the production of hernia by interfering with solid union.

Frequently the appendix will be found with a mes-appendix. This should be ligated *en masse* or in sections, and cut away from the appendix. Then the appendix is ligated at its base and removed. Removal of the appendix is almost universally recommended, but Mr. Treves has simply straightened an appendix which he found angulated by adhesions and left it in the wound. Mr. Tait has practiced in more than one case splitting open the appendix and inserting a fine drain tube into it. From these instances it will be seen that there exists in some minds an almost superstitious fear of removing the appendix. Certainly no sentiment can exist concerning the ablation of the appendix such as there is in regard to the ovaries and Fallopian tubes? Having the appendix once in hand, it does not add to the dangers of the operation in the least degree to remove it, while recurrence of the disease is thereby rendered impossible.

Occasionally the appendix is found to have sloughed off at its root, leaving a ragged opening into the cæcum. In one or two cases the edges of the opening thus left have been inverted and closed successfully by Lembert sutures. In others the wound was left entirely open and packed with gauze; an intestinal fistula or artificial anus formed, but in time closed spontaneously. Yet another required a subsequent operation and Lembert sutures before it was cured.

Some surgeons recommend that in septic cases a little flap of peritoneum be sewed across the stump, or that it be tucked under a bit of omentum. I can see no advantage in this. It prolongs the operation and does no good, while by so doing we risk the formation of a secondary abscess pocket. Very many appendix stumps have been simply dropped into the wound again after ligation; fæcal fistulæ did not form and the wound closed satisfactorily.

Any portions of gangrenous omentum presenting in the wound should also be ligated beyond the junction with healthy tissues and cut off.

Any small openings into the peritoneal cavity may next be sewed up carefully if the general peritoneum does not require drainage.

Then in regard to irrigation. If the general peritoneal cavity has been opened extensively, or if it is septic, it should be thoroughly washed out through the lateral incision. If it has not been involved the abscess cavity and wound alone should be irrigated. Under the latter circumstance we may employ a strong bichloride solution, but if the peritoneum is to be flushed nothing but water should be used.

If the general peritoneum has been septic or extensively opened or manipulated it is essential to use drain tubes to the base of the pelvis. The ordinary straight glass tubes do not answer well, and rubber is not satisfactory. Here I have a collection of angulated and curved glass tubes, most of which have been used with great satisfaction in appendix cases. The angle makes it possible to get the tube to fit well over the brim of the pelvis, yet not to project awkwardly from the

lateral wound. By attaching a few inches of rubber tubing to the end of the ordinary cleansing syringe the bent tube can be cleaned.

The suturing of the wound is especially important if the case is *not* a septic one. Then the tissues should be sutured, layer by layer; this gives the best assurance of firm primary union and the avoidance of hernia. If, however, the wound is septic and drainage or packing is employed, secondary union is inevitable. But I would still urge that the wound be as carefully sutured as possible in all cases, leaving ample room for exit of the drain-tube or packing. And I might say, in passing, that simple packing with strips of double cyanide or iodoform gauze will be found to answer all purposes of drainage in cases where the general peritoneum does not also require drainage.

Some surgeons advise using no stitches in septic cases, but simply packing of the entire wound with gauze. But by suturing we can usually secure primary union in a portion of even a foul wound, and temporary stitching has appeared to give a certain anchorage and support to the subjacent intestines, which, when the sutures are removed, is more or less retained. The stitches, of course, are to be removed, one or more at a time, when swelling, infiltration, tension, or deficient drainage become apparent. Strips of adhesive plaster should be employed to give the wound support and approximation during granulation.

Complications such as gangrene of intestine or mesentery, must be dealt with upon general principles of abdominal surgery. If intestinal obstruction complicates the case, the site of obstruction should be ascertained, and the condition relieved, if possible, before closing the wound. Cases in which obstinate constipation has existed up to the time of operation, should be examined during its performance for possible obstruction.

Should peritonitis develop subsequent to operation, and not speedily yield to active purgation, the wound must be reopened, and the abdominal cavity irrigated thoroughly and drained. Continued obstruction could probably be best dealt with through a new median incision rather than through the original wound.

As soon as the patient comes out of ether, if the bowels have not been well emptied before operation, it is my custom to at once begin the administration of one-eighth grain doses each of calomel and podophyllin at twenty minute intervals, until purgation is accomplished. This usually takes but a very few hours. Later salines may be employed if required.

Full strength peroxide of hydrogen solution has given me great satisfaction for cleansing and washing the wound-cavity when suppuration commences and sloughs are forming—it greatly facilitates the separation of the latter. Persisting fæcal fistulæ usually close spontaneously in time. Should they not, then reopening of the parts several months later, and suturing of the cæcal or other opening with Lembert sutures is indicated, and has proved successful in several instances.

In conclusion, let me say a word in regard to operations undertaken in the interval between acute attacks, or, what may be termed, *prophylactic operative treatment.*

The indications for this measure are: Constantly recurring attacks (usually indicative of the presence of a foreign body in the appendix), which interfere with the individual gaining a livelihood, or render his life a constant burden, worry, and expense to him; also, where recurrent attacks have taken place in those, as seamen, hunters, explorers, etc., who are liable to be again attacked when they may be out of reach of adequate surgical aid. In this class of patients, operation during quiescence of the disease should be considered, and perhaps urged by the medical attendant. In most other cases, I do not think excision of the appendix should be often attempted in the quiescent period. We should rather counsel delay until the onset of the next acute seizure, when we can conscientiously urge the removal of the offending organ at once—that is, on the first or second day. This advice is given principally because of the great difficulties and dangers frequently encountered in operating during the intervals of attack when the adhesions are extremely dense. In fact, patients have died as a result of the long time required to complete the operation, because of the elaborate dissection required to free the appendix from its matrix of densely organized adhesions. In several instances the very best operators have been compelled to abandon these operations in the interval of attacks, not only without having been able to remove the appendix, but also without having been able to discover the organ in its bed of adhesions.—For discussion, see Society Reports.

Mix acids with water by pouring the acid into the water and not the water into the acid, as the latter process may cause an explosion of steam.

Society Reports.

PHILADELPHIA COUNTY MEDICAL SOCIETY.

SPECIAL MEETING SEPT. 28th, 1891.

Dr. Thomas S. K. Morton read a paper on "The Operative Treatment of Typhoid Fever" (see page 808).

DISCUSSION.

Dr. William Pepper:—I scarcely think that I need say much, for the subject as presented is largely one of operative technique, that the views of a purely medical clinician possibly are scarcely appropriate. Assuming that the subject under discussion includes all the acute inflammatory affections of the appendix, cæcum, and pericæcal tissues, much has been said to which I should take strong exception from the standpoint of a pure medical practitioner. I believe that if every case of appendicitis were operated on, the mortality would be tenfold what it now is. For more than a quarter of a century I have been in the habit of seeing a great many cases of appendicitis every year. I base this statement partly upon the classical researches of Dr. Fitz, who has demonstrated more clearly than any other, that in a large proportion of cases of right iliac trouble the appendix shares in the trouble, if, indeed, it is not the starting-point of the trouble. Now, as a general rule, these cases recover under medical treatment and remain permanently well afterward, no surgeon being associated in the treatment of the case. In no year during the past two decades, have I failed to see a considerable number of cases of this kind and the cases that have demanded operation, as contrasted with those which get perfectly well without operation is probably at least as one to a score. I think that the assertion that as soon as appendicitis is suspected the surgeon should be called in, is quite out of accord with the experience of physicians the world over. As I have said, I think that the vast majority of cases, in first attacks at least, undergo resolution and terminate with some more or less permanent injury to the appendix, but without going on to the production of abscess, provided the treatment be instituted early and be kept up faithfully. In many of these cases there is early development of induration and fullness in the right iliac fossa, and in proportion as this appears early is it likely that the case will run a favorable course, or, if later, it develops signs of suppuration it will admit of treatment by the simple Willard-Parker extra peritoneal incision. In proportion as the symptoms are violent, without localizing phenomena in the right iliac fossa, is there danger that rupture of an abscess has occurred, to be followed by the development of general peritonitis. I am entirely at one with the speakers who insist on early operation where this latter condition exists. I have had the operation performed as early as thirty-six hours from the initial symptom, and have found suppurative peritonitis already present. I am sorry to say that in this case there was a fatal result, as will sometimes happen in the hands of the most skilful operator. I think that the experience of all will confirm the statement that the operation is a grave one. The operation of laparotomy for disease of the appendix, whether it is exploratory or radical, is not a trifling operation, and I have rather extensive records to show that it is an operation attended with a great deal of danger, even in the hands of the most brilliant operator. I should protest against the view that, as soon as the diagnosis of appendicitis is made, an operation should be encouraged.

I believe that it is possible to note the time, in a certain large proportion of such cases, when the symptoms indicate the spread of inflammation, and then I think that the operation cannot be too promptly performed.

The question of diagnosis remains, in spite of all the good work that has been done, a most difficult question. The McBurney point I believe to be largely without value, uncertain in its location on account of the very varying relations of the appendix, apt to be mistaken for points of tenderness due to wholly different causes, and apt possibly to be mistaken for sympathetic tenderness of nerve points in the abdominal wall. I therefore believe that this sign, from which much was hoped, will prove to have very little positive diagnostic value.

The rectal examination has seemed to me to be of very material value; it is true not so early as we could wish, but in many operative cases I have found the roof of the pelvis altered as determined by a careful rectal exploration. I feel that I am wholly incapable of putting in words, nor do I know that this has been done, the exact differential diagnosis of the cases which demand early operation. While this is true, I would still urge the view that this does not justify

the subjection of every patient with appendicitis to laparotomy. I trust that we shall learn to arrive at a more exact differential diagnosis. There is a combination of a certain history of the development of the case, which taken in connection with the facies, the general symptoms, and the abdominal condition, as determined by external and by rectal examination will, in the hands of an experienced clinician, serve in the great majority of cases as a basis for this diagnosis. It is difficult to state this in terms as precise as we should state the terms of a diagnosis of encysted pleurisy, but I think that in those who have studied these cases will recognize a *tout ensemble* which admits of a diagnosis of those cases which should be subjected to early operation. I believe, on the other hand, that in the great majority of cases we are justified either by the mildness of the symptoms or the localizing tendency in the right iliac fossa in urging medical treatment, and this is further justified by the very frequency of these cases.

Lastly, I shall say a word as to my entire opposition to operation in the majority of cases in the interval between recurring attacks. I think that medical records will show too many cases where thorough treatment, hygienic, dietetic, and medical has been followed by complete cure. I have had so many such cases in which cure has occurred after a number of recurrent attacks, that the adoption of a general rule that where a patient has had two, three, or more attacks he should be subjected to a grave operation like laparotomy, seems to be a dangerous postulate. I think it better to secure the consent of the patient to the performance of the operation, should alarming symptoms make their appearance in any attack, and then to persevere with carefully regulated medical treatment. There are cases unquestionably where the conditions of the patient, the fact that he may be attacked when out of reach of skilful surgical aid, make it necessary for the patient to decide between a change in his habits of life and an operation. These are exceptions, and it does not follow that a general rule that laparotomy should be performed in the interval between recurrent attacks of appendicitis, should be laid down.

Dr. Keen:—I wish to take exception to what Dr. Pepper has said in reference to not calling in a surgeon in a case of appendicitis until operation is needed. I think that it is of the most urgent importance that the surgeon be called in not to do an operation, but for consultation for his judgment rather than his knife—not necessarily to do a laparotomy immediately—but for the purpose of being ready to deal intelligently and promptly with the conditions when the time for operation arrives. He should not be called in, then, new to the case and unfamiliar with its features, and desiring, therefore, time to become familiar with it, unless the case is so serious that operation is evidently and instantly required. The surgeon should be with the physician the moment the diagnosis is made, not to do the operation then but to be ready to do it the moment that it becomes necessary. I have seen cases lost, and have lost some myself, I am sure, from delay, from the natural unwillingness to plunge right in and do a laparotomy the moment we are called to see a case that really needs it, and yet from unfamiliarity is regarded as a doubtful case. We should have every point at our fingers' end and be familiar with the fluctuations of the symptoms. Then our aid will be much more valuable than if we are called in only when the emergency for operation has arisen. A plain case every one can read and decide quickly. It is the doubtful cases that need carefully weighed decision—a snap judgment on a sudden call is more apt to be wrong than right.

Mr. Thomas Bryant, of London:—I assume that the term appendicitis as here used, includes all those cases which have been spoken of as typhlitis, peri-typhlitis, and by other names, all of which have probably more or less connection with the appendix itself. Starting with that assumption, I at once proceed to the treatment of appendicitis. Here at the beginning, although a surgeon, I agree very strongly with the observations of Dr. Pepper. I am convinced that operative treatment is most valuable in appendicitis. I am equally convinced that delay in operating is the wisest course in the majority of cases. I should like to say in this place that it seems to me that the authors are a little mixed in regard to the classification of these cases. They have included cases that are acute from the beginning, with cases that are not acute, that have a slow and steady course. The cases that have a slow and steady progress, that begin with localized pain in the right iliac fossa, accompanied with tenderness and soreness, less swelling without any very acute symptoms, are cases which you must feel can be dealt with satis-

factorily without the surgeon's knife; I do not say without the surgeon's aid, but without the surgeon's knife.

Dr. Morton spoke strongly of the use in these cases of calomel and podophyllin. Such statements rather startled me and I should have been glad to have had some evidence of its value given. I should prefer to follow the line of treatment suggested by Dr. Pepper and not give calomel and podophyllin in frequently repeated doses. I would rely more upon rest, belladonna externally and opium internally, and diet, believing that by such means and knowing that by such means the bulk of the cases are permanently cured. In exceptional cases where these good results do not occur and graver symptoms appear, the swelling increases and symptoms of peritonitis develop, the surgeon's aid becomes of immense value, and certainly where these symptoms do appear and there is a steady progression toward the bad, it is unquestionably time for the surgeon to take a hand. In all acute cases I have no doubt as to the right of the surgeon to interfere. I have seen cases where within thirty-six hours after such acute symptoms it was necessary for the surgeon to expose the part and let out the inflammatory fluids, if not remove the appendix itself. To my mind these two classes of cases which I have briefly described fairly indicate the line that the surgeon should take. Trusting very much to expectant treatment in the least acute cases and surgically interfering early in the acute.

In reply to the question in regard to the propriety of operating, whether or not the surgeon is justified in operating between the attacks, my judgment would decide in the negative. In the majority of cases there is no second attack. If there is a second attack it can be treated on the same lines as the first, only there is a tendency toward interference if the symptoms do not settle down rather rapidly. I say this because I am sure that I have seen many instances where things have settled down after a second attack without any further trouble. Because we have met with cases that after the second, third, fourth, or it may be the eighteenth attack, have at last come to the surgeon's knife, I think that we should not accept that as a decided evidence in favor of surgical interference. In fact, we must be governed by each case by itself, and we should surgically interfere only when we find small chances of nature terminating the case guided by medical skill.

Then we come to the operation. I am not sure that I am quite in accord with the authors of the papers. It is quite true that in doubtful cases of appendicitis—that is, cases in which you do not expect to find a great deal of pus or inflammatory fluid, the incision in the right semilunar line will probably be the best. In this way you come down readily on the cæcum, and you are more apt to find the appendix. The majority of cases with which the surgeon has to deal are not quite in the stage to which I have referred. There is generally much more diffused swelling about the cæcum, and that swelling gravitates backward and upwards, sometimes toward the loin. I can recall a good many cases that I have opened where I was certain the swelling was about the cæcum, where it was backward toward the lumbar region. I can recall several instances in which my attention was drawn more to the lumbar region than to any other part, and it was only by going into the history that I concluded that the trouble was located in the cæcum. The lateral incision is a good one in these cases, but it must be more lateral than the semilunar line. I have made my incision well back, corresponding to the line of the anterior superior spinous process and tending backward towards the loin. In this way you get well at the cæcum and your finger can be readily passed into the iliac fossa. You can examine the part, you can drain the part well and generally by the open treatment, not being too careful to stitch the wound, a good result takes place. I would say that in a large number of cases —my friends may say neglected cases—that an incision more posterior than the semilunar line would be the better one. The incision in the semilunar line should be reserved for cases that have not advanced to such an extent as I have just indicated. If there were time I could give the Society many cases as illustrations of the truth of what I have said.

Another point to which I should like to allude is the question whether or not these are all really cases of appendicitis. In at least three instances of cases which had presented a history of a cæcal trouble, but in which death had resulted from some other cause, I have found cicatrices in the posterior part of the cæcum some distance from the appendix. In two cases that I have treated the evidence pointed to the cæcum as the seat of trouble. In one, a boy, aged twelve years, I incised an abscess, and eventually a large orange-seed escaped. I have no reason to believe that that could have come from the appendix. In the second case a piece of bone that had been swallowed had evidently

passed through the wall of the cæcum and caused suppuration. These two cases presented all the features of typical appendicitis. They were dealt with in the way that I have stated and both recovered. We must, I think, bear in mind that these cases are not all due to disease of the appendix, and that many of these may have no connection with it.

This brings me to another point, and that is whether or not, under all circumstances, it is expedient to search very carefully for the appendix.

In these severe cases should we disturb the parts so much as is often absolutely necessary? We have had to-night good evidence of the difficulty of finding the appendix in some cases. I have always felt that in these cases we should do more harm than good if we searched too far for the appendix. I am satisfied with well irrigating the part and treating it by the open method.

Dr. Morton has mentioned hernia as following the operation. I have never seen this. That may be because the bulk of my incisions have been made posteriorly. I have done many of these operations, and have seen many others done by friends, but I have never seen hernia as a result.

Dr. J. M. Baldy:—It has always seemed to me that it was not so much a question of the diagnosis of appendicitis, as the differentiation between the operative and the non-operative cases. The diagnosis of appendicitis *per se* is extremely easy; at least, so I have found it. As far as symptoms are concerned, I know of only one that is of constant value, and that is, constant, deep-seated pain in the right iliac fossa, with induration. I think in such a case there is little question but that there is inflammation in or about the head of the cæcum, and, presumably in the majority of cases, in the appendix.

Mr. Bryant has spoken of cases where large foreign bodies have been discharged through an abscess, and claims they have come from the cæcum. He offers no evidence of this, except the size of the body. I have seen the appendix sloughed off, leaving a sufficient opening in the cæcum to admit the index-finger, so that I cannot see that the size of the body indicates in any way that it came from the cæcum, and not from the appendix.

I have been glad, and, at the same time, rather surprised to hear the McBurney point condemned. I believed that it is utterly worthless as a reliable point in the diagnosis. It is one of those attempts at refinement in diagnosis which are apt to lead only too many astray. I have tried to apply McBurney's point, but have failed in every case.

The rectal examination may be of value in many cases, but we have all seen cases—and Dr. Keen's is one in point—in which there is a small abscess high up, which could by no possibility be recognized by rectal examination. If the abscess contain many ounces of pus, it will generally extend downward toward the pelvis, and may be felt through the rectum. There are, however, so many cases in which this can not be done that we can place no definite value on this method except in a limited number of cases.

I cannot help thinking that purgation is of distinct value when I see the great relief afforded to a man groaning with the most intense pain, simply from having a movement of the bowels. It may not be curative, but in every case, whether abscess is present or not, it gives great relief. I believe that purgation should always be used. At the same time, if the patient was suffering, I should not hesitate to use opium until the purgation had acted, or after it had acted in case of necessity. The amount required is not great, and it will not interfere with the purgation. Those cases in which it is difficult or impossible to induce purgation, are going to do badly.

I know of no other intra-abdominal disease in which it requires more skill and practical experience to differentiate between those cases that should be let alone surgically, and those which should be operated on. I grant that the majority of cases of appendicitis get well without any operation. Again, there are certain cases that do badly from the beginning, and in which operation is clearly indicated. But, with certainty, there remains that large class of border-line cases in which it is next to impossible to say whether pus is present or not. If there *is* pus no one should hesitate. The operation for abscess is simple and easy. The abscess once opened, I do not think that in these acute cases any time should be lost in searching for the appendix. In trying to find the appendix, and even when found, in trying to remove it, the general peritoneal cavity will often be opened, and life will be lost where otherwise it would have been saved. Only one case, so far as I am aware, has been reported in which the abscess has been opened and the appendix left, where a second operation was required for a severe recurrent attack.

I believe with Dr. Keen that the surgeon should be associated with the case from the

beginning, although not necessarily to operate. When a physician is called in to operate, the tendency, if there is doubt—and doubt only too often exists—is to postpone the operation. If the surgeon has seen the case from the beginning, and studied the symptoms and knows the details, when the time comes he will have made up his mind whether or not to operate. If, however, the surgeon loses another twelve or twenty-four hours in hesitation, in addition to what the physician has already lost, the patient may be irretrievably lost. The deaths after operation are due not so much to operation as to delay.

It is impossible to lay down any rule as to the time at which operation should be performed in any case, or in any class of cases. In some the onset is so sudden and violent that it is impossible to come to any decision as to the seat of disease. This was the case in the patient reported by Dr. Keen, and in another instance I know of in New Jersey. In the latter case, is was not until a few hours before death that the symptoms were sufficiently marked to cause any alarm. This is often the history of cases in which the operation is postponed. The patient will be doing well until within a few hours of death, when the end comes suddenly, and the patient sinks rapidly.

Dr. Frank Woodbury :—Although as a physician I look at this subject from the medical standpoint, I am in favor of operating. To save time, I may say that I heartily coincide in the statements just made by Dr. Pepper. I also endorse the remarks of Mr. Bryant, in which he anticipated what I had intended to say—that is, that each case must be studied by itself. I think that the surgeon and physician look at these cases a little differently. The surgeon is looking for general rules to govern him in the treatment of cases, while the medical man is more in the habit of individualizing his patients. Concerning the propriety of operation and the results to be anticipated therefrom, we all acknowledge that there is in some individuals a tolerance to operative interference and to suppuration that does not exist in others. Some will survive dangerous gunshot wounds, others will perish from a slight injury. These are probably points that will enable us to determine this difference in tolerance of different individuals, and, were they in our possession, should undoubtedly enter into the question of operation, but at the present time, unfortunately, we are not prepared to formulate these points in any given cases of appendicitis which comes before us. Physicians, who are accustomed to go into the history of the patient and to investigate the antecedents of the case, know that individuals who belong to families with a high physical standard and who lead regular lives, are able to stand severe illnesses and operations, coming through them speedily and well, while others, having poor family history, bear very little surgical interference, and easily succumb to disease.

The question of the time of operation and propriety of operation really resolves itself into the query, "At what time does a case of appendicitis become a surgical case?" I would here raise my voice against the physician yielding to the temptation to put in a hypodermic needle into an iliac abscess or swelling in order to make the diagnosis. As soon as he does that he takes surgical responsibilities on his shoulders, and in no case are they likely to be more serious than in appendicitis. The physician should have sufficient surgical knowledge to determine when the time for operation has arrived, or, acknowledge his inability to decide this, he should secure the best obtainable surgical advice, not necessarily to operate, however, but to determine the propriety and proper time for operation, if found necessary.

Among the cases that come to my mind, three stand forth prominently. One was the first case which I saw, some eighteen years ago. A man in the lower walks of life, continued at his work as a machinist, making no complaint, until one day he fell on the floor of the shop in a collapse, and was brought to the Pennsylvania Hospital. He had a feeble pulse, and a Hippocratic face; the surface was cold, and, as he was dying, no attempt was made at diagnosis. He died in a few hours, and the post-mortem showed it to be a case of perforative appendicitis, with perforation and the usual foreign body. Here there was a question of operation. The patient did not seek medical advice, and there was no time for operation.

The last case I saw in my own practice occurred last spring, in a patient whom I had attended at intervals for a number of years. I had attended him a year before with a light attack of appendicitis, and warned him that if he had a subseqnent attack he should consider the question of operation. He did have a subsequent attack while away from the city, and on his return was attended by another physician for three months. The man improved and was about, but always felt a weight and pain in the right iliac fossa. He was then taken with acute obstruction of the bowels with intense

pain, and finally I was sent for. In this case nothing that was given him produced a movement of the bowels. I may say that in this case Dr. Thomas G. Morton operated on the second day after I saw him, but the patient died five days later without a movement of the bowels. The bowels were probably matted together and gangrenous.

The third case that occurs to me is one operated on also by Dr. Thomas G. Morton five years ago, which I have reported to the College of Physicians[1] and to this Society. I believe that Dr. Morton claims that this was the first case in this country where the correct diagnosis was made prior to operation of amputation of the appendix, and where the patient recovered. The patient has been well since the operation, although prior to it he had had a number of attacks. The patient is present to-night, and I should be pleased to show him to the Society. He is still wearing a light truss to protect a weak place in the abdominal wall at the lower portion of the incision. [The patient was exhibited.]

Dr. H. A. Hare:—I rise for information rather than to discuss the surgical aspect of the papers which we have heard. Like Mr. Bryant, I am at a loss to know why calomel and podophyllin, the latter in such large amounts as one-eighth of a grain every twenty minutes, should be given after an operation for appendicitis. Podophyllin is the slowest acting purge in the Pharmacopæia, taking eight or twelve hours to produce an effect, as a rule; not only this, but these drugs act on the small bowel, high up, while the appendix is in the large bowel, low down. If saline purgatives were ordered it seems to be a better treatment, for we have evidence of their great value. Even these are not without danger. I do not believe that a man can take one-eighth grain of resin of podophyllin every twenty minutes until he is purged without producing much intestinal griping and pain. Anstie pointed out the fact that podophyllin was a distinct irritant, particularly to the small intestine.

Dr. De Forest Willard:—Mr. Bryant has said that he has not seen hernia follow this operation. A boy came into my office to-day on whom I operated two years ago. He did perfectly well for a year, when on attempting to lift a heavy body the bowel protruded through the center of the cicatrix. He had worn a bandage and a truss, but I put on a heavier truss, which relieved him for a time. He returned in four months; the pressure of the truss had produced a large slough, and he came near having a perforation of the bowel. The ulcer finally healed. He now has at the outer angle of the wound a second small hernia, and at the inner angle there is a slight tendency to protrusion. The wound was a large one. The boy was in extremis at the time of operation, and there was an enormous accumulation of pus.

In regard to deep-seated pain and induration in the iliac fossa as a diagnostic sign, I have seen cases in whom there was not a particle of local pain or of induration.

The boy already mentioned had no such symptoms. He had been kicked at the umbilicus, and the pain was chiefly at that point, yet the abscess was in the iliac region.

The appendix was open, and a small mass of fæces had escaped. There was an enormous accumulation of pus extending down into the pelvis on one side. The appendix was removed, and the opening stitched.

Dr. M. F. Kirkbride:—In the past year and a half I have had four cases, but shall speak only of one. I shall first refer to the history of the case as given in a letter to the previous attendant. The physician was called on Thursday, April 3. The patient had been constipated for one day. It was at first thought that the case was one of typhoid fever, as the father had recently recovered from this disease. Calomel was given, but no action secured. Citrate of magnesia was given with the same result. The pain and tenderness in the right iliac region increased. There was some tympanites. Injections of soap and water with a few drops of turpentine were practiced with no result. Salts in one drachm doses were then given without effect. Vomiting began. It became apparent that it was a case of appendicitis with obstruction of the bowels. Injections given on Saturday morning were not retained. On Saturday a surgeon was called in consultation. Operation was decided on, but as the surroundings were not suitable the family was advised to have the patient admitted to a hospital. This they agreed to do, but at 3 P. M. decided not to do so. The physician in charge then declined to have anything more to do with the case.

I was called to see the patient on Sunday evening, at ten o'clock. The temperature was 99.5°, the respiration 36. No pulse at the wrist. The heart beats 130. He vomited everything, and for several days had had stercoraceous vomiting. I gave hypodermics of morphine and atropine, and after-

[1] Case reported in Proceedings of the College of Physicians of Philadelphia, vol. VII.

ward hypodermics of strychnine. After he had reacted somewhat I put him in the knee-chest posture, and gave an enama of sulphate of magnesia, turpentine, glycerin, and warm water, and gave whiskey and turpentine by the mouth. I also gave for several hours sulphate of magnesia in one drachm dose. The first two doses were rejected, but afterward there was no vomiting whatever. In three hours I had the tumor removed and the boy sleeping comfortably, and after that he got along nicely. On the sixth day after I was called a slough passed from the bowel. This was three inches in diameter. The case then went through that of a regular case of typhoid fever, as far as the temperature was concerned, and even showed the eruption. The diagnosis of appendicitis was made by two physicians and an eminent young surgeon.

Dr. Joseph Hoffman:—McBurney's point has been condemned, but the reasons have not been given. The position of the appendix varies. You cannot lay your finger on any special point and say that the appendix should be found. We must remember that the appendix revolves in three planes, and that, therefore, it may have three systems of revolution. We cannot expect to find th appendix in the same position. This an atomical point forever blots out McBurney's point.

In reference to purgation, I had a case of which I shall recite the points in which the use of calomel and opium comes out beautifully, so far as the apparent curative effects are concerned. Dr. Wheeler was treating a case of appendicitis with opium for some days without benefit. He then called me in and I brought Dr. Price. He was then purged with calomel after the opium treatment, and the pain entirely disappeared. Shortly afterward he went to Baltimore and had a recurrent attack, from which he died. This shows what purgation will do.

Dr. M. Price:—We are certainly slightly mixed in the discussion of this question. The physicians are talking about appendicitis without perforation, and the surgeons of appendicitis with perforation, conditions entirely opposite. Drs. Pepper and Meigs say they never saw but one single case of perforative appendicitis get well, and they reported that case themselves. It is true that this statement was reported fifteen years ago, but that does not make the disease any the milder.

There is one other point. It is absolutely fully to operate for appendicitis and expect good results, unless you can purge the patient. If you succeed, and after the operation persist in the use of purgatives, every case, so far as I know, will recover.

If at the operation there is found a barrier separating the abscess from the general peritoneal cavity, thorough irrigation of the abscess cavity is required. If this barrier cannot be demonstrated, thorough irrigation of the whole peritoneal cavity should be insisted upon. In a case operated on five weeks ago, there was well-marked thickening and induration in the right iliac fossa. I removed five or six ounces of pus, and when I came to irrigate, although I used every precaution, I found the small intestine slipping by my finger. I washed the abdominal cavity out thoroughly, and passed in a straight glass drainage-tube, held in position by one stitch at the lower angle of the wound, and then packed with gauze down to the knuckle of the intestine. The appendix was eaten off by an ulcer, and so gangrenous that I was afraid to touch it. The man was purged every day for a week, and made an uninterrupted recovery. I may mention that I have never seen a case of appendicitis with perforation and general peritoneal inflammation without a subnormal temperature.

Dr. Morton:—There are many symptoms that have not been mentioned. Bladder irritation is a prominent symptom in some cases from inflammation or pressure on the ureter, or of the bladder wall. This brings out one of the dangers in operating on the appendix. Mr. Treves has predicted that some day a portion of the ureter will be taken out in mistake for the appendix or torn out with it.

It is also to be remembered that in perityphlitis the superficial veins are more engorged on the right side of the body than on the left.

Perhaps my views in regard to the time of operation have been misunderstood. What I desired to say was that no case that is not improving should be permitted to go beyond the third day without surgical interference. I do not mean to say that all cases should be left so long. In some the operation will be required in the first few hours; in others on the first day, and in still others on the second day. The great majority of cases will recover from the present attack at least, upon purgation, topical applications, and regulation of diet.

Another danger of allowing septic processes to go on in the neighborhood of the appendix is the development of phlebitis in the branches of the mesenteric vein causing troubles in the liver. Pain in the liver is

often a sign of appendix disease. It has been held that many cases of abscess of the liver have originated in septic processes around the appendix infecting the veins. I saw Dr. Steinbach operate on a case in which the patient before operation showed a tinge of jaundice. The appendix ran upward nearly to the liver and was surrounded by a large abscess. Intense jaundice supervened after the operation, and the man died apparently from acute inflammatory degeneration of the liver. I believe that the liver trouble was aseptic complication from the appendix.

In regard to the use of calomel and podophyllin, I would say that I know very little about experimental therapeutics, but after giving the various purgatives a thorough trial I have found that minute doses of calomel and podophyllin frequently repeated give the best results in these cases. They move the bowels thoroughly and with rapidity. In the case reported from fifteen to twenty movements were secured in eight or ten hours. These small doses cannot be vomited as readily as a drachm of salts can be, nor do they produce emesis even shortly after etherization, when salines would not be tolerated by the stomach. After the bowels have been thus started and the stomach quieted as a consequence, salts will be retained, if indicated, and work with greater promptitude and efficiency.

Dr. Price :—I rejoice that in America we have adopted some of Mr. Bryant's surgical wisdom in regard to hernia. "If you find a man hanging cut him down."

I will allude to three cases in which there were recurring attacks. In one, the man had had twelve to fourteen attacks. I saw him in the last in collapse on the eighth, tenth, or perhaps the twelfth day. In this case the argument offered by the family physician was the common one, that as the patient had recovered from so many attacks he would also recover from this. This is a dangerous argument and often a fatal one. I said that this man would be dead in three hours; he died in an hour and a half. In a recent case I saw the patient on Monday. Dr. Agnew saw him on the same day, and we both urged section. The physician and family decided to wait. On the following Friday Dr. Agnew was asked to operate and refused. Many of us are now taking high ground and refusing to operate at the eleventh hour. It is not fair to surgery to operate on dying patients. Dr. Agnew has recently operated in the twenty-fifth attack, removing a huge appendix, and the boy recovered.

Deaths from appendicitis are very numerous; indeed, more so than a year ago. They were then called typhoid fever, but now our methods of diagnosis are more accurate.

Mr. Tait's recommendation of drainage has been referred to. That would be as bad surgery as to drain a huge pus-tube. The cheesy, disorganized appendage remains. No one would cut down on a sequestrum in bone disease and simply put in a drainage-tube.

I have the records of two cases of appendicitis, in one of which the opening was through the lungs and the other through the œsophagus. Dr. Hunter McGuire has reported a case in which the appendix was found floating in a puddle of pus. You will all remember the illustration in the *British Medical Journal* or the *Lancet* of a year ago of a case of hepatic abscess with a large opening through the loin. You could see the liver, the kidney, and the colon. The man lived twelve days and died of dysentery I never see a case of neglected appendicitis without thinking of this case of neglected abscess of the liver. In most cases that we see the small intestines are enormously distended and the pelvis is filled with adherent knuckles of bowels. In these you often have obstruction. In many cases the use of a purgative is simply folly before the adherent knuckles of intestine have been released by operation.

I scarcely favor the long ligature method. In these cases I have inverted the stumps, and the transfixation has been made with the finest needles. If the appendix sloughs it goes inside.

The McBurney point is wholly ununiform and worthless.

A NEW MEDICAL SOCIETY.

THE AMERICAN MEDICAL TEMPERANCE SOCIETY.

During the first day of the meeting of the American Medical Association at Washington, last May, a "call" was posted in the various halls where the different "Sections" met, inviting all physicians favorable to the formation of a Temperance Medical Society on the basis of the British Medical Society. The call was signed by Dr. N. S. Davis, of Chicago—known to physicians everywhere as the "Father of the American Medical

Association." Punctually at 2 P. M. twenty persons had assembled.

Dr. Davis took the chair and proceeded to give us information in relation to the British Society which began with only ten persons and now numbers hundreds of the eminent physicians of England. The terms of membership are the payment of a small fee and entire abstinence from the use of intoxicating beverages.

There is no pledge required, it being believed that no physician worthy of the name would desire membership if he were not a total abstainer.

The liberty of members to prescribe alcohol is not forbidden, should they deem it necessary.

The names of those present were then enrolled, and to them were added a number more of persons who had written to Dr. Davis their wish to become members, but who could not be at the meeting. A meeting was appointed to be held the next morning at 9 o'clock. There were more persons present on that occasion, and the organization was perfected. Some appropriate papers were read and discussed, and Dr. Davis spoke earnestly on the importance of strict temperance by the members of our profession, and closed by declaring, that he did not regard *the use of alcohol essential to the treatment of any disease.* Strong testimony from a man so competent to observe and with an experience of more than fifty years of practice! Dr. Davis thus outlined the purpose and object of this Society: "The object of this association is to advance the practice of total abstinence in and through the medical profession, and to promote investigation as to the action of alcohol in health and disease, and it aims at being a bond of union among medical abstainers scattered all over our country. It admits as members all regular medical practitioners who are practical abstainers from all alcoholic liquors as beverages. Members are not required to sign any pledge, but if such for any reason cease to become total abstainers, it is expected that they will withdraw from the Society."

The great object of the Society is to study and investigate the action of alcohol both as a beverage and medicine, and to promote the strictest temperance among physicians. The fact that this Society originated through the efforts of the noble man, who created our great National Medical Association, many years ago, and which has so greatly harmonized the profession, will at least protect it from being considered the outcome of fanaticism. It is to me very comforting, and shows how greatly the profession has advanced in respect for temperance principles since 1853, when a president of our State Society, in the performance of his duty to the Society, was severely denounced for merely entreating the profession to forbear the then reckless use of alcohol as medicine.

Sixty-one physicians were enrolled as original members at the meeting in Washington, and the secretary informs me that there are more than a hundred now. The secretary writes: "The meeting of the Society held in July, in Staten Island, was quite a success—thirty-two medical papers were read on alcohol. Four or five were a defense of its use, and the rest a condemnation of it."

The officers of the Society are:—

N. S. Davis, M. D., President, Chicago, Illinois.

Vice-Presidents, I. N. Quimby, M. D., Jersey City, N. J.; J. B. Whiting, M. D., Janesville, Wis.; F. E. Yoakum, M. D., Shreveport, La.; J. Taft, M. D., Cincinnati, Ohio.

Secretary, T. D. Crothers, M. D., Hartford, Conn.

Treasurer, G. W. Webster, Chicago, Ills.

Physicians desirous to become members of the Society may do so by addressing the secretary, Dr. Crothers, Hartford, Conn.

HIRAM CORSON, M. D.,
Plymouth Meeting P. O., Pa.

SELECTED FORMULÆ.

VOMITING OF PREGNANCY.

The following is recommended (*La Rassegna di Scienze Mediche*, No. 2, 1891) in the vomiting of pregnancy:

℞ Menthol.....gramme j (grs. xv.)
Alcohol.....grammes xx (f℥ v.)
Simple syrup..... " xxx (f℥ j.)
Sig. One teaspoonful every hour.

ANTINERVINE.

The substance which has also been called salicyl-bromanilide is, according to Ritsert, a mixture of

℞ Ammonium bromide.....parts 25.
Salicylic acid..... " 25.
Acetanilide..... " 50.

SCIATICA.

℞ Tinct. colchici..... .....m ¾.
Tinct cimicifugæ.....m ¾.
Tinct. aconiti ....m ¾.
Tinct. belladonnæ..... ...m ¾.
M. Sig. One dose.

—*Starr on Nervous Diseases.*

DEODORIZATION OF IODOFORM BY CREOLIN.

A patient, suffering from a bone-felon, applied for treatment to Dr. L. Vazci (*Rundschau.*, May, 1891) who wrote for a salve consisting of iodoform, two parts; creolin, one part, vaselin, twenty-five parts.

On visiting the patient the next day, he was much surprised to find that the salve was of a different color, but, what was of much more importance, there was not the slightest odor of iodoform. Most of the deodorizers contain some one of the ethereal oils which have an irritating effect; whereas creolin does not do this, but is itself a good disinfectant.

RHEUMATISM.

Dr. Staples recommends:

℞ Olei gaultheriæ.
Olei olivæ, aa.....part equal.
Sig. Apply locally to affected parts, afterwards keeping the member covered.

ASCARIS LUMBRICOIDES.

The following is said to be a specific for ascaris lumbricoides:

℞ Santonine.....gr. x.
Irisin.....gr. ij.
Sacch. lactis.....gr. iv. M.
Sig. One powder, every night at bedtime; this for children 3 to 4 years of age.

—*Med. Summary*, Sept., 1891.

VEGETATIONS ON THE GENITALS.

Dr. Uriola states that the following mixture, applied with a camel's hair brush to vegetations of the genitalia, will cause a rapid disappearance of the growths:

℞ Acidi salicylici.....part 1.
Acidi acetici.....parts 15.

—*National Druggist*, July 1, 1891.

CYSTITIS.

Wyman and deLeval recommend the following formula in all cases of cystitis:

℞ Ext. pichi fld.....f ʒ j.
Potassii nitratis.....f ʒ j.
Syr. simplicis.....f ʒ iij.
M. Sig. A teaspoonful every three hours.

—*The Satellite.*

LINIMENT FOR GOUT.

In his small work on rheumatism and gout, Dr. F. Leroy Satterlee recommends the following local application in cases of gout:

℞ Ol. gaultheriæ.
Ol. olivæ.
Lin. saponis.
Tr. aconite.
Tr. opii, aa.....ʒij.
M. Ft. liniment. Sig. Apply freely and cover with cotton batting.

RHACHITIS.

In the *Journal de Médecine de Paris* the following prescription is given for the treatment of rhachitis:

℞ Phosphorus.....gr. j.
Absolute alcohol.....ʒ v.
Spirits of peppermint.....gtt. xxx.
Glycerin.....ʒ ij.

Six drops of this mixture may be given in water three times a day, and after the lapse of one week another drop may be added.

INFANTILE BRONCHITIS.

℞ Vini ipecac.....ɱ j.
Tr. opii camphorat.....gtt. ij.
Syr. scillæ.....gtt. v.
Aq. menth. piperit. q.s. ad.....f ʒ j.
M. Sig. One dose to be taken every two hours.

—*Dixie Doctor.*

CHOLAGOGUE POWDERS FOR HEPATIC COLIC.

In the *Revue Général de Clinique et de Thérapeutique* the following treatment for the relief of hepatic lithiasis is given, based upon the fact that Binet and others have found that the benzoate and salicylate of sodium act as cholagogues. The nux vomica in the prescription aids in regulating the bowels and in relieving anorexia and dyspepsia:

℞ Benzoate of sodium } of each.....gr. lxxv.
Salicylate of sodium }
Powdered nux vomica.....gr. vij. M.

This is to be divided into 20 powders, of which the patient should take 1, three times a day for two months.—*Med. News.*

PERMANGANATE OF POTASSIUM IN DIPHTHERIA.

Er. Netzetzky says that his twenty-two years' practice convinced him that the best treatment of faucial diphtheria consists in an energetic use of permanganate of potassium.

The drug should be administered in the shape of paintings and gargle. The following strong solution should be employed:

℞ Potassii permanganatis.....ʒ j.
Aquæ destillatæ.....f ʒ j. M.
Sig. To paint the affected surface every three hours.

For gargling, which is to be repeated as often, a teaspoonful of the same solution should be mixed with a tumblerful of boiled water.

In those cases in which the child is unable to gargle, the following mixture should be given internally:

℞ Solutionis hydrogenis superoxydati, two per cent.....f ʒ ij.
Glycerinæ.....f ʒ ij.
Sig. A teaspoonful every two hours.

—*Medical Record.*

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The Editor will be pleased to get medical news, but it is important that brevity and actual interest shall characterize communications intended for publication.

LEADING ARTICLE.

THE CONSTITUTIONAL DISTURBANCES FOLLOWING THE PASSAGE OF INSTRUMENTS INTO THE MALE URETHRA AND BLADDER.

That the passage of instruments into the male urethra and bladder is at times followed by more or less grave constitutional disturbances is a fact known to every physician, and one which has long been recognized. At no period in the history of medicine has a thorough understanding of the pathology of these affections been as important as it is to-day, when both the urethra and bladder are more frequently operated upon than ever before. It is also most desirable that the terms used to denote the different clinical conditions resulting from the use of instruments, should be clearly defined, so that, as far as possible, we may arrive at uniformity of expression in recording them. That there is need of this, a glance at the literature of the subject will fully demonstrate.

Many theories have been advanced to account for the causation of the various systematic disorders which are clinically observed, and those conditions have received different names from many writers upon the subject. The principal terms now in general use to denote these affections are catheter chill, urethral fever, catheter fever, and urinary fever. Dr. Paul Thorndike, of Boston, has contributed at the last meeting of the Massachusetts Medical Society, a very excellent paper, in which he has grouped and definitely classified in a practical manner, the various diseased states occurring after instrumentation upon the urethra and bladder. His division of the cases seems so admirably capable of containing all the different conditions met with, that we will quote his synopsis of the four classes. This is as follows:

I. The cases of "urethral shock" brought about by the simple passage of an instrument into the urethra. Very common, and, as a rule, of very little importance, but occasion-

ally terminating in speedy death. The fatal form is rare, and is usally associated with renal disease of some sort.

II. The cases of "acute urinary fever" caused, probably, by absorption of poisonous products from the urine. This acute attack at times occurring without any known cause, such as further instrumentation.

III. The cases of "chronic urinary fever," coming on after catheterization, in cases where obstructive disease had pre-existed for a long time.

IV. The cases of "septic infection" from an unclean instrument. This may be merely a mild cystitis; may extend upward and cause septic trouble in the kidneys, or may manifest itself as a true general septicæmia or pyæmia.

An examination of the literature of this subject convinces us that the above classification is plain, practical, and wide enough to include all cases. It is also founded upon the most recent clinical and experimental knowledge, so that as a good working classification it is doubly commendable.

The first class of cases includes all those due to shock. These vary from the slightest "catheter chill" to a fatal degree of shock, which is happily of rare occurrence. The most common form of "catheter chill" occurs directly after the use of instruments and soon passes away without any bad effects.

The second class includes all cases of acute fever, commonly called "catheter fever." Usually this occurs within a few hours after the passage of the instrument, and rarely persists longer than 24 hours. The etiology of "catheter fever" is still a matter of discussion. Some writers regard it as due to shock, as all admit the first class of cases are; others state that malaria is the causative factor; while others believe that it is due to uræmia. The fact that the attack does not commence until some hours after the passage of the instrument is against the "shock" theory, for we should naturally expect it to begin immediately after instrumentation, and also to be in proportion to the severity of the surgical procedure, but clinical experience teaches us that such is not the case. Again, if catheter fever is due to shock, we should expect, as Dr. Thorndike remarks, that prophylactic measures would be powerless to prevent its occurrence after urethral operations, yet from the testimony of able surgeons we know that a large proportion of urethral operations are followed by no febrile disturbances, especially at this time when perfect drainage is secured, and the urine prevented access to the wound.

Mr. Reginald Harrison, who is entitled to speak with some authority upon this subject, believes that this acute febrile attack under discussion is due to the septic absorption, and he has found in his experience that it is more likely to occur when the wound is made in the floor, than when it is situated in the roof of the urethra. He says: "A dependent position of the incision is more likely to be associated with the fever than one not so situated." If it be admitted that septic infection is the cause of ordinary "catheter fever," the question arises: which constituent of the urine is responsible for the symptoms? To determine this, Dr. Bouchard, of Paris, has recently made very interesting studies, with the result that he attributes the symptoms to the absorption of certain alkaloids formed in the intestines by putrefactive organisms, and normally excreted in part by the kidneys. These researches still lack confirmation, and it may truly be said that they have only opened a very wide field for the further study of the physiological chemistry involved. The weight of evidence proves that "catheter fever" is due to septic substances, but their precise nature must still be considered as largely hypothetical.

The third class of cases, or those of chronic fever, embraces all the cases in which fever arises after catheterization for the relief of urinary incontinence due to distension and weakness of the bladder, usually caused primarily by an old stricture or a chronic prostatic hypertrophy. The "residual urine" has slowly increased in amount, and chronic distension with consequent atony of the walls of the bladder finally occur, after which the cases come under observation. The onset, course and termination of this

type of fever are thus described by Dr. Thorndike: "The patient is instructed as to his condition and started regularly on his catheter-life. In a few days he begins to feel poorly, has chilly feelings, but not necessarily a distinct rigor. He becomes feverish, but his fever is slight and has distinct intermissions. He loses appetite, suffers from thirst, and feels wretchedly all the time. The tongue becomes dry and brown. Examination generally shows a cystitis, more or less marked, even if this condition did not exist before the beginning of regular catheterization. This condition may exist for weeks, and yet the patient recover with proper care, or it may end fatally, in which case there will be found almost invariably advanced disease of ureter and kidney."

The cause of this type of fever has been explained, in those cases in which there is associated disease of the kidneys, by the theory that the withdrawal of the urine relieves the pressure long exerted by it upon the kidneys through the dilated ureters and calices, thus inducing active congestion of the kidneys, which, owing to the want of normal elasticity caused by the chronic fibroid changes which the organs have undergone, cannot be controlled, and an acute pyelo-nephritis is the result. In a certain proportion of cases however, post-mortem examination reveals no chronic lesion of the kidneys, and for such cases no adequate explanation is forthcoming.

The fourth class comprises all cases of direct septic infection from the passage of unclean instruments. The cases differ widely; thus, we may have a simple cystitis, or it may extend up the ureters and cause septic pyelo-nephritis and death from surgical kidney; or direct infection may occur through a wound made by the unclean instrument, and we may have a true septicæmia or even pyæmia with general formation of pus in the tissues and in the serous cavities of the body.

The fact that such serious affections do occasionally follow the use of instruments upon the urethra and bladder, certainly is the strongest possible plea for the most scrupulous care in the proper cleaning of apparatus, and in all surgical procedures upon this part of the body.

CORRESPONDENCE.

PHENACETINE AND SULFONAL.

ED. MEDICAL AND SURGICAL REPORTER:

I have thought it desirable to put on record my experience with these two substances. I find phenacetine to be a much safer antipyretic than antipyrine or antifebrin as it does not have their depressing or exciting effect on the heart. I could not treat a case of epidemic influenza without phenacetine. I believe it better to use small and frequent doses. It does not give rise to gastric disturbance. It is prompt in action and decided in its effects as a therapeutic agent. It has no accumulative tendencies and is much safer for children and old people than opiates. Another advantage is that it does not lock up the secretions. In the muscular pains of la grippe it is far preferable to opium. In rheumatism I combine it with salol.

I have also been using sulfonal, the most valuable of hypnotics, where opiates, on account of stimulating and exciting effects on the nervous system are contra-indicated. In fevers where there is a tendency (when opiates are used) of over exciting the brain I have found sulfonal to induce calm and refreshing sleep with no tendency to delirium. I have a case of intermittent fever in which I rely solely upon sulfonal to induce sleep. In brain fever it would prove of incalculable benefit. In *Mania a Potu* it would prove the "*sine qua non.*"

In my experience with sulfonal and phenacetine I find that small doses (3 to 5 grains) repeated every two or three hours, or even every hour, are better than larger ones.

A. O. Stimson, M. D., C. M.,
Thompson, Pa.

A new remedy for whooping-cough is ouabaine in doses of about gr. $\frac{1}{1000}$. It has been tried with success by Dr: Gemmell, of Glasgow, and lately by Dr. I. L. Porteous, of Yonkers, N. Y.—*New York Med. Jour.*

Book Reviews.

ESSENTIALS OF BACTERIOLOGY: BEING A CONCISE AND SYSTEMATIC INTRODUCTION TO THE STUDY OF MICRO-ORGANISMS, FOR THE USE OF STUDENTS AND PRACTITIONERS. By M. V. Ball, M. D., Late Resident Physician in the German Hospital, Philadelphia; Assistant in Microscopy, Niagara University, Buffalo, New York, etc. With seventy-six illustrations, some in colors. Philadelphia: W. B. Saunders; 16 mo, 159 pp. Price $1.00.

The subject of bacteriology has, of recent years, grown to such enormous proportions and assumed so important a position in clinical medicine, pathology and hygiene that it is safe to say that during this period of its active growth it has undergone more rapid development than any other branch of medical science. Indeed, so rapid has been its advance that the text-book of to-day shows signs of age on the morrow.

There has existed an unquestionable need for a small work embodying the salient points of bacteriology, and specially adapted for laboratory use. It is just such a book that Dr. Ball has prepared. He introduces the student by referring to the classification, structure and reproduction of bacteria. Then are considered: their origin, growth, life and properties; methods of examination, staining, culture, etc.; non-pathogenic bacteria; pathogenic bacteria; bacteria pathogenic for animals, but not for man; finally, there is an appendix on yeast, odiums, moulds, actimomyces or ray fungus, and the examination of air, water and soil.

The compend is thoroughly practical, very concise, clear, well-written and sufficiently illustrated. On the whole, it is the best book of the kind in the English language.

ARTIFICIAL ANÆSTHESIA AND ANÆSTHETICS. By De Forest Willard, R. M., M. D., Ph. D., Clinical Professor of Orthopœdic Surgery in the University of Pennsylvania; Surgeon to the Presbyterian Hospital, Etc., and Lewis H. Adler, Jr., M. D., Instructor in Rectal Diseases, Philadelphia Polyclinic and College for Graduates in Medicine. Detroit: Geo. S. Davis; 144 pp. Price 25 cents, cloth 50 cents.

The subject of which this brochure treats is one of such universal interest and importance to the profession that any new publication has a just claim to immediate attention. While this work is unpretentious in size the authors have so carefully selected and condensed the material at their disposal that they have really embodied all of the important practical points in connection with anæsthesia.

They consider, *seriatim*, the history of anæsthetics, the preparation of the patient, general anæsthetics, local anæsthetics, special modes of producing anæsthesia, anæsthetics in obstetrical practice, and the medico-legal relations of artificial anæsthesia.

The book has been very carefully prepared, and it cannot be too highly recommended to the student, nurse, dentist and physician.

PERISCOPE.

THERAPEUTICS.

USE OF COLLODION IN RELAXATION OF THE MEMBRANA TYMPANI.

Dr. Lannois, of Lyons, France, calls attention (*Annales des Maladies de l' Oreille*, etc., vol. xvii., No. 1) to the above named treatment, first suggested, he says, by McKeown, of Belfast, in 1879. Employment of collodion has no inconveniences or dangers, and the author thinks that it not only holds the relaxed membrana in proper position, by its contractive and extracting power, but also that it possesses a truly curative effect, as the patients continue to hear better after the collodion film is removed from the ear.

Two cases are then told in detail illustrative of the good results of this treatment in relaxed conditions of the membrana tympani. McKeown recommended to paint the collodion on the membrana, but Lannois prefers to drop into the ear a few drops of the collodion after the membrana tympani has been pushed into the normal position by inflation of the tympanic cavity.

THE TREATMENT OF LUPUS BY LYSOL.

Lysol is a saponified phenol derived from tar oils, or, rather, from cresols by the action of nascent soap; it is a liquid containing the higher homologues of carbolic acid. Lysol differs from creoline, to which it is related, by its most perfect solubility in all proportions of water. Comparative bacteriological tests have proved it to possess higher antimycotic powers than carbolic acid or creoline, while it is less variable in constitution than the latter, and less poisonous than either.

The liquid is well worthy of extended use

by dermatologists and others called upon to treat lupus, for a short period of treatment by it suffices to produce a marked improvement in the appearance of the disease, and the results are so pronounced as to suggest a permanency, the reality of which only the lapse of time can, of course, determine. The surgeon, guided by a clear conception of the necessity for assiduous or watchful perseverance in the treatment of this disease, will perceive that this substance gives promise of ameliorative, if not curative power.

My plan is to apply, or direct the patient to apply, the lysol freely to the surface of the lupus patch by means of cotton twisted around a probe or wooden match, and to allow it to dry on. As in the employment of any other remedy intended to attack lupus nodules, it is first necessary to remove crusts and *débris* by the usual means. If this has been done, and it is found that the lupus is ulcerated, the lysol may be equally applied to the ulcerated and sound surface of the patch; it is not essential to first heal the ulcers, although if this be done by means of a simple ointment, the pain of the application is somewhat less than if made to the ulcerated surface.

Having applied the remedy myself, to show the patient how to proceed, I usually direct him to repeat the process once a day, or every other day, or less frequently if its use gives rise to much cracking of the epidermis or other inconvenience. Too frequent application is not desirable, besides being unnecessarily painful; for instance, if it be used at intervals of twelve hours, the second application is much more painful than the first. Its too frequent use causes either the formation of an impermeable and undesirable pellicle, as the result of its caustic action; or gives rise to superficial cracks in the epidermis, especially if the lupus is situated on a part of the skin naturally subject to tension. The immediate result of its application is to redden the parts, and sometimes to cause a slight œdema. This redness, with the overlying undried film of the drug, gives the part a peculiar, translucent, moist, glistening, erythematous appearance, which gradually subsides after the drying of the lysol. After a few days the scar is pliable, smooth, and of a good appearance from a cosmetic point of view, approximating the tint of healthy skin. The resulting scar seems even superior to that obtained after multiple scarifications.

The pain of the application is acute for half or three-quarters of an hour, quite disappearing in from two to three hours. This pain is less than that caused by the use of the multiple scarifier, and is not seriously objected to by patients to whose courage the prospect of the deforming sequelæ of lupus acts as a tonic.

In lupus of the nose or lips, since it is not easy to surmise how deep is the invasion, the disease should be attacked from the skin and mucous surfaces. The pain of application to the skin is much less than that to the nasal mucous membrane, and here the prior use of strong cocaine pigments has not appeared to reduce the pain. Dr. Unna has used lysol in the form of a plaster mull, and appears to have been favorably impressed with it. It is classed by him among substances which do not produce pain, and he asserts that the use of the mull is nearly painless.—Dr. Leslie Phillips, in *Brit. Med. Jour.*

THE TREATMENT OF TUBERCULOSIS BY MEANS OF SUBCUTANEOUS INJECTIONS OF EUCALYPTOL, GUAIACOL, AND IODOFORM.

Pignol (*Compt.-rend. hebdom. des Séances de la Soc. de Biol.*, 1891, No. 10) reports that for three years he has applied eucalyptol, alone or in combination with iodoform and creasote or guaiacol; guaiacol and iodoform, without eucalyptol; and creasol and guaiacol, subcutaneously, in the treatment of tuberculosis, with most satisfactory results. He uses as a menstruum sterilized liquid vaselin, olive oil, or oil of sweet almonds—preferably one of the latter two—containing twenty per cent. of the medicaments in varying proportions, of which at least from three to ten cubic centimetres are injected daily. The injections are made with antiseptic precautions into the retro-trochanteric fold. The best results were obtained from a combination of guaiacol and iodoform.

Picot (*Bull. de l'Acad. de Méd.*, 1891, No. 9) has reported the results of treatment in twenty-five cases of pulmonary tuberculosis and eight of pleurisy by means of subcutaneous injections of iodoform and guaiacol, dissolved in sterilized olive oil and vaselin, each cubic centimetre of the solution containing one centigramme of iodoform and five of guaiacol. The injections, each of three cubic centimetres, were made into the supra-spinous fossa daily, and were unattended with unpleasant local results. As an evidence of the absorption of the medicaments, the presence of iodoform could be demonstrated in the urine, guaiacol not be-

ing eliminated by the kidneys. As a rule, the injections occasioned no general reaction, but in certain cases, especially in those with fever, profuse perspiration followed, succeeded in turn by a sense of comfort and a lowering of temperature. In exceptional instances abdominal pain and diarrhœa developed in the course of treatment, but subsided on suspending the injections. In three cases of advanced phthisis, in which death took place, the changes found in the lungs were indicative of a reparative tendency. The tubercles presented an appearance of beginning fatty degeneration; the cavities were clean and dry. In one case the ulcers in the intestine showed a disposition to cicatrization. Neither in the lungs nor elsewhere was there any evidence of a fresh eruption of tubercles as a result of the treatment. In the remaining cases of phthisis the cough diminished, the sputum became less, and the number of bacilli in the sputum smaller, the body weight increased, the night sweats disappeared, the general condition improved, and the physical signs receded. In the cases of pleurisy the results were equally good. Effusion speedily disappeared, and recovery was rapid.

PARALYSIS AFTER SUBCUTANEOUS INJECTION OF ETHER.

Dr. Eberhart, of Cologne, has collected (*Centralbl. f. Gynäk.*, March 21st, 1891) cases in which the subcutaneous injection of ether caused paralysis of the muscles supplied by nerves with which the injected fluid had come in contact. In a case of Remak's in which the patient was comatose from carbonic oxide poisoning, ether was injected under the integuments of the extensor aspect of each forearm. Paralysis of the extensors of the fingers, of the index and little fiingers and of the metacarpal bone of the thumb, followed the injection. In another case, the paralysis was similarly distributed, excepting that the extensor indicis was spared; the condition did not pass away for four months. Arnozan had already noted that the posterior interosseous nerve, below the point where it perforates the supinator brevis, is especially exposed to injury from ether injections. Charpentier and Barbier have described neuritis degenerativa of the great sciatic nerve after ether injection. In Mendel's cases paralysis of the extensors of the ring and little fingers, with diminished cutaneous sensibility, followed hypodermic injection on the extensor side of the right forearm; recovery ensued in three weeks. In a case of Neumann's, ether was administered in the manner to a phthisical patient, and in both forearms. On the third day there was swelling around the punctures, pain on movement of the hands, and impaired movement of the middle finger. The latter symptom lasted for a long period. In Dr. Eberhart's own case, a plastic operation was performed on a woman for prolapsis uteri. The careful rawing of surfaces on the vaginal wall took a long while. The patient seemed collapsed at the end of the operation, and ether was injected under the skin of the right forearm, a hand's breadth below the olecranon, and at a second point, midway between the elbow and wrist. On the second day, partial paralysis of the extensors of the middle ring, and little fingers was noted; they could be extended, but the extension could not be maintained. There was no pain, and no lesion around the punctures. Faradization did little good till massage was added. It was six weeks before the extensors regained their complete power. The patient afterwards suffered from peculiar sensations in the forearm whenever the weather was changeable. It is not likely that these neuroses are due to direct wounding of the posterior interosseous nerve by the point of the syringe. The nerve is probably inflamed by direct contact by the ether.—*Brit. Med. Jour.*

ALKALIES IN UNIVERSAL PRURITUS.

C. Lange, (*Hospitals Tidende*, No. 21, 1891,) calls attention to the fact that most text-books present one with a most cheerless prospect in the section on universal pruritus. Arsenic internally and carbolic-acid compresses locally are the means most frequently relied upon. The writer has found a very prompt action in sodium bicarbonate combined with lithium carbonate in four cases of universal pruritus, namely in two ladies, of which two were over fifty, and an old gentleman, in which cases the usual remedies had failed. The pruritus, in one case, in a fifty-one year old lady, who was formerly well, and by no means hysteric, which had localized itself in the genital region, was so severe that her friends feared that she would either lose her mind or throw herself out of the window. She became emaciated and hollow-eyed, and presented pruritus of the entire body. Only hot compresses, as hot as could be borne, with large doses of chloral, would produce sleep. The administration of the alkalies mentioned, together with carbolic-acid compresses, improved her condi-

tion in a few days; in six weeks she was markedly better, but still required hypnotics and a compress at night. In three months no more hypnotics were necessary. In the urine of two other patients an abundant precipitate of uric acid and urates was found.

THERAPIE OF HUCKLEBERRY.

Prof. Winternitz recommends a decoction of huckleberries (saccinium myrtillus) in the different forms of diarrhœa. He covers the dried berries with cold water and cooks them for two hours, stirring them up quite frequently. After the mass is syrupy-like, he separates it from the remaining berries and presses the juice from them out. He then cools the juice, after which it is ready for use. One to two teacupsful of this juice per diem is the dose.

Winternitz claims that this preparation will act beneficially in the most pernicious cases of diarrhœa.

He uses this decoction in gonorrhœa as an injection, and claims to be very successful with such treatment.—*Blœtter fuer Klin. Hydrotherapie.*

MEDICINE.

ANALYSIS OF TWO HUNDRED AND SIXTY-TWO CASES OF CHOREA.

Goodall (*Guy's Hosp. Reports*) has analyzed the above number of cases of chorea occurring in the hospital during eleven consecutive years. Seventy-four of this number were males and one hundred and eighty-eight females. The youngest case was a female infant of one year; the oldest case a man of thirty-six years. There were one hundred and four cases that had recurrence of the disease. The smallest number of attacks occurred during the summer months. Hemichorea was present in sixty cases. In one hundred and fifteen cases the heart was normal, twenty-one of which number had had rheumatic fever. In one hundred and thirty-five cases there was some cardiac or vascular change. As no mention is made of the presence or absence of hypertrophy or dilatation, it is impossible to make out what per cent. of these the author regards as being chronically diseased.

There were eleven fatal cases, in which death was due to changes in the endocardium, emboli probably being formed in many cases. Seventy-one cases had had rheumatic fever; in only sixteen cases did choreic manifestations precede the fever.

The family history showed chorea in twenty-eight cases, mother, brother or sister having been affected. There was no history recorded of a father having had the disease. As causes are mentioned rheumatic fever, fright (forty-five cases), irritation, pregnancy, injury.

PERITYPHLITIS.

Sonnenburg (*Berliner klinische Wochenschrift*, No. 2, 1891) advises operation if the presence of pus is recognized. In the sero-fibrinous exudations around the cæcum an operation is excluded because they are absorbed. The larger the exudate at the beginning, the less likelihood is there of a purulent collection around the appendix, and the greater the probability of an infiltration around the cæcum. The small exudations which are, perhaps, circumscribed at the beginning, and situated usually at the classical space above Poupart's ligament, originate almost always from the appendix. Moreover, the greater the violence of the initial symptoms, the more apt is the trouble to be an exudation or phlegmonous process around the appendix. In most of the author's cases, violent pains in the umbilical region developed suddenly at night or after a movement, and was followed by vomiting with diarrhœa or constipation. In a few hours there was pain in the ileo-cæcal region, and indican in the urine. In perforation there is apt to be a small, hard, resistant space above Poupart's ligament, dull on percussion and sensitive to pressure. Even a slight rise of temperature, as 100.5°, if pathognomonic of pus. In cases where a small, indistinct fluctuation exists, an incision should be made down to the peritoneum and the wound tamponed, puncture of the abscess being made later. The incision should be long, curved and similar to that employed in ligation of the common iliac artery, and to avoid subsequent hernia it should be made as close to the crest of the ilium as possible. After several days, or as soon as adhesions have formed, the abscess is to be opened and drained. The wound is dressed daily, but not irrigated, and heals in four or five weeks. Of twelve of the author's cases in which immediate incision was done, five died of sepsis which was present before the operation. The following conclusions are submitted: (1) Endeavor to diagnose the simple from the purulent forms of perityphlitis. The sero-fibrinous cases do not require operation; but in patients suffering from tuber-

culosis or intestinal disease these may become purulent and then require a simple operation. (2) Purulent exudations originating in the vermiform appendix cannot be absorbed. (3) The more superficial the exudation, the earlier is operation indicated, that is, within the first few days of the beginning of symptoms. (4) If the exudation is small, the operation should be done in two sittings, as early as possible after the beginning of the disease.—*Univ. Med. Mag.*

THE NATURE AND TREATMENT OF STAMMERING.

Emil Behnke (*Jour. Laryngology and Rhinology,* July, 1891). The author declares that the terms stammer and stutter should indicate the same condition, rejecting a former distinction that stammer should refer to that form of obstruction in which there is inability to pronounce vowels, and stutter to that form of impediment in which the consonants are at fault. The causes of these disturbances are attributable to the nervous centres controlling the mechanism of respiration, phonation and articulation.

Children afflicted with stammering do not, as a rule, outgrow the habit; ridicule or severity will increase the difficulty.

Conditions needing surgical or medical interference, such as spinal curvature, post-nasal adenoids, decayed teeth, intestinal worms and phimosis, may prevent cure of stammering until their removal.

Cases of stammerers are divided into two classes—those in which fault lies in management of respiratory apparatus, and those in which it does not. In the former the prognosis is more hopeful. To test patient, he is placed flat on his back upon a couch, and is drilled in methodized and graduated series of sounds and inspiration, produced by diaphragm and muscles of abdominal walls, the hand of the trainer upon the epigastrium accentuating these movements.

If after such practice the patient shows improvement, a favorable result may be expected from treatment. In those cases in which obstruction does not depend upon imperfect respiration, Behnke attributes much of the trouble to "an involuntary exaggeration of all the stops and checks taking place in the vocal apparatus from glottis to lips, and he must therefore be trained to make these closures as shortly and lightly as possible." Thus a short aspirate may be inserted after a consonant; as G-h-eorge instead of George, or, as patient would say, G-g-g-eorge; and p-h-a, instead of pa.

Stammerers sing and whisper without difficulty, because in singing there is almost continued tone, and in whispering there is absence of tone. It is advised "to dwell on vowels at expense of consonants—and if vowel difficult to sound, it should be preceded by a short inspiration. Another beneficial exercise is to speak slowly, with teeth overlapping and pressed tightly together.

Result of treatment influenced by severity of case, intelligence of patient, also existing morbid conditions, especially those due to chorea or other nervous disturbances.

CHILBLAIN OF THE LIP.

Taenzer, in the *Monat. f. prakt. Derm.* gives the case of a patient of 33 years, who has suffered since he was 12 years old from a complaint common enough, but interesting to dermatologists from its location. It is called by the author "Lippenfrost," or, in English, chilblain of the lip.

According to the patient the trouble made itself manifest during the rigorous winter of 1870–71, by a sensation of smarting in the lower lip, with tumefaction and a reddish-blue coloration. In the beginning of April, 1871, the trouble disappeared spontaneously after having resisted all medical treatment. In October the affection reappeared exactly the same as at first, except that it was more painful owing to the presence of deep fissure. Desquamation was present, which was renewed daily for many days. During the following March all the symptoms disappeared as before, having resisted all medical treatment, only to reappear during October, and this condition of things continued regularly—the complaint always appearing in October and always disappearing when the warm weather began. Pruritis, always present, was increased on touch. The fissure, closed during the night, opened in the morning when the patient ate or talked, and gave rise to considerable pain with slight hæmorrhage. There was never any ulceration with resulting cicatrice, and when the complaint disappeared in the summer it left no trace, either objective or subjective. The upper lip was never affected.

Toward the end of October the complaint begins by a desquamation which lasts from six to eight days, and is followed by a sensation of burning and itching in the middle third of the interior lip. The color is from a bright red, or bluish red to a brownish red; the lip is tumefied at this point. The

exfoliation is completed in one day and the lip has, in appearance, a normal aspect, but it is very sensitive. Then the process begins again and all the phases are repeated, the complete cycle requiring from six to eight days. This is kept up until the warm season sets in, when it disappears spontaneously.

No treatment gave durable results except that the pain and itching could be relieved by hastening the cicatrization of the fissure by means of gutta-percha with lead plaster and balsam of Peru.—*Annales de Derm. et de Syph.*

SURGERY.

NITRITE OF AMYL IN CHLOROFORM ANÆSTHESIA.

Two recent deaths from chloroform administered for anæsthetic purposes direct attention anew to the various methods of resuscitation when dangerous symptoms appear. Of these methods none seems more promising than that in which nitrite of amyl is used. Dr. F. A. Burrall, of New York, believes that there is an essential antagonism between this drug and chloroform, and in a letter to the *Medical Record* refers to ten instances in which life was doubtless saved by the amyl. He sums up his views in these words: "In deciding upon remedial measures we must depend on both the observations of scientists and the teachings of clinical experience. With such light thrown upon the action of chloroform, let us suppose that a patient who is inhaling chloroform suddenly develops dangerous symptoms. Of such symptoms a tendency to fatal syncope is the most frequent. What conditions are present under such circumstances, and what shall be done to avert a fatal issue? We may hold that the cerebral vessels are contracted, and the central nervous system is losing the blood supply on which its activity depends. Circulation and respiration are faltering and death may occur suddenly at any moment. It is not a time for the application of any one method or remedy, but all the usual aids, as well as the reserves, of science should be immediately employed. The first indications are to revive circulation and respiration, since what arouses one seems to awaken the other. I think that, as nearly simultaneously as possible, the head should be lowered, the neck extended, nitrite of amyl given hypodermically or by inhalation, and artificial respiration practiced by the Sylvester method, since this method is the most covenient. It should not be forgotten that pressure on the abdominal aorta increases the blood-pressure in the carotid. If asphyxia be present, it would seem that the neck should be extended and the head raised higher than the feet."—*Brooklyn Med. Jour.*

RESECTION OF THE THORACIC WALL FOR OSTEOCHONDROMA.

Professor Ivan K. Zarübin, of Kharkov, relates (*Transactions of the Kharkov University Society for the advancement of the Experimental Sciences*, 1891, vol i, p. 1. with 3 figs.) the case of a well-made but rather thin and anæmic, young Cossack, who sought his advice on account of a steadily growing and occasionally painful tumor of seven years' standing. It measured 21 centimetres horizontally and 19 vertically, and occupied the right side of the chest between the nipple line and the postaxillary line, from the sixth to the ninth rib. The new growth was hard, nodulated, immovable, and non-adherent to the skin. The integuments over it were thinned but otherwise normal, and the nearest lymphatic glands apparently unaffected. An osteochondroma of the thoracic wall was diagnosed. The huge mass was removed together with the involved portions of the seventh, eighth, and ninth ribs. The gap left in the chest measured 17 centimetres in a horizontal and 16 in a vertical direction. On opening the thoracic cavity the lung collapsed, but only partially, owing to pleural adhesions around the periphery of the new growth. None of the serious respiratory or cardiac disturbances usually observed in similar cases occurred, and the hæmorrhage was only trifling. The cavity was gently cleaned with gauze, soaked in a 1 per cent. boracic acid solution, after which a long drainage tube was inserted, and the skin wound (which was crucial in shape) was closed with silk sutures. The tumor, which was much larger than an adult man's head, weighed 6 pounds and 6½ ounces; its point of origin was the seventh rib. Under the microscope it was found to consist of new osseous tissue in its central part, and of hyaline cartilage in the peripheral part. For the first two days the patient was much collapsed and cyanosed, and suffered from agonizing cough and obstinate vomiting. Subsequently his general condition slowly improved. A good deal of pus continued to escape from the tube for about seven or eight weeks. On the sixty-first day after the

operation the tube was removed; the wound was soundly healed throughout. On the hundredth day the man was discharged quite well, having been supplied with an appropriate pad to protect an extensive and deep depression, which remained at the site of the resection. According to the author, similar cases of resection of the thoracic wall for new growths have been reported by Billroth, Fischer, Leisrink, Maast, Richerand, Sédillot, Vasilieff, Volkmann, Waltmann, and Witrel. Of the number 6 recovered, while 4 died.—*Brit. Med. Jour.*

INGUINAL COLOTOMY.

In the *Centralblatt für Chirurgie*, No. 30, 1891, Dr. Landow, of Göttingen, describes an abnormal condition of the sigmoid flexure, which is regarded as one of practical interest, as the possibility of its occurrence in any case of inguinal colotomy would contraindicate the practice advocated by Madelung of stitching up the lower opening after complete division of the gut, and allowing the lower and detached segment to fall into the pelvis. In two cases of inguinal colotomy recently observed in the Göttingen clinic, where the usual practice is to divide the gut and to stitch the two open ends to the external wound, it was noticed that the discharge of fæcal matter always took place from the lower and not from the upper opening, although at the time of the operation the lower portion of the gut was traced downwards towards the bladder and the upper portion in the reverse direction. In one of these cases, which terminated fatally, it was found at the necropsy that the sigmoid flexure, which was very long and freely movable, passed upwards and outwards as far as the splenic flexure of the cæcum and then curved downwards and towards the middle line, reaching the rectum after a long and tortuous course. The division of the gut having been made in the ascending portion, what was supposed to have been the distal opening was that nearest the cæcum, whilst the supposed upper opening corresponded with the divided end of the inferior segment of the elongated and contorted sigmoid flexure.—*Brit. Med. Jour.*

THE ABORTIVE TREATMENT OF BUBOES.

Welander (*Archiv fur Dermatologie und Syphilis*, 1891) endeavored to eliminate a specific bacteria from chancroidal pus, but failed. The staphylococci and other cocci found were readily killed with mercurial lotions. Believing that buboes were caused by the transference of the staphylococci and streptococci, by means of the lymph channels to the glands from the chancroid, he endeavored to find a mercurial preparation which, when injected in concentrated form, would not cause intense pain or marked irritation. The material here used was benzoate of mercury, in one per cent. solution, with one-half per cent. of sodium chloride added. One or two injections of a half-gramme of this liquid were made into the gland. The skin was previously cleansed, also the syringe. A compress of sublimate solution was bound over the gland. Redness of the overlying skin was treated by penciling with itchthyol solution, 1 : 2-3. The details of thirty-two cases are given. In twenty-seven of these fluctuation was either absent or doubtful. In eighteen hospital cases healing occurred without discharge of pus; in two some pus oozed out through the injection puncture. These cases were kept at rest. In nine private cases healing occurred without discharge, and three discharged pus. In eight cases, in which fluctuation was marked, all sooner or later discharged through the injection opening, none absorbed. Most of them pursued a relatively favorable course, and in only two cases was incision necessary. There are sixteen cases still under treatment. In summing up, seventy-three per cent. of the cases gave favorable results. It is to be hoped that a mercurial preparation will be found that causes less pain and infiltration than the benzoate of mercury; but as yet we know of none. Whether the theoretical grounds on which this treatment was founded are accepted or not, it cannot be denied that by this means buboes have been healed without the occurrence of those unsightly and lifelong-lasting scars, as has heretofore been the case.—*Univ. Med. Mag.*

INFECTION AND TUMOR FORMATION.

Schleich (*Deutsche Med. Woch.*) remarks that infection of the organism never arises from dispersion of aggregations of leucocytes. On the contrary, every tumor is a tissue of new-formation, which possesses an analogy to the development of the fecundated egg. Has the vital energy inherent in the cells from the first physiological impregnation been dissipated, so will the cells lose their resistance, and react moreover to all impressions in a manner quite different from usual. Such a weakened cell becomes a pathological "sperma," and impregnates another cell. Both the impregnating and impregnated

cells are cells of the tissue from which the tumor itself develops. A cell or pathological "sperma" fructifies; another cell comparable to the ovulum is fructified, and thus begins the tumor, since, inside the organism, a tissue cell which has become infectious (sperma) infects (impregnates) a second cell. Sleich regards tumor formation as a kind of endogenous infection. Oestrich remarks, that while this theory has never been disproved, there has certainly never been the slightest demonstration of its truth.

REMOVAL OF A STONE FROM THE BLADDER BY VAGINAL CYSTOTOMY.

In the *Pittsburgh Medical Review*, 1891, Reamy, of Cincinnati, records a remarkable case, in which, after the removal of a stone weighing 365 grains, *per vaginam*, it was necessary to perform four operations to close the resulting vesico-vaginal fistula, which was half an inch in length. The stone would have been removed by the supra-pubic operation if the operator had realized its size. The urethra was dilated to the size of the little finger; no paralysis followed.

Owing to smallness of the vagina, the child being but six years old, together with the fact that the child was quite fat, made the operation for closure most difficult; and at the fourth operation the parts were much altered, considerable sloughing had occurred, and incrustation with urine salts; the edges of the wound were everted, ragged and spongy.

The left ureter was seen to be discharging urine from the wall of the fistula. With much difficulty the ureter was dissected up, the mucous membrane of the bladder cut away sufficiently to uncover it; the free end of the ureter, liberated by the dissection referred to, was not cut off, but turned into the bladder. Seven No. 30 silver wire sutures were introduced into the fistula and allowed to remain two weeks; upon removal union was perfect. Though Parvin, Campbell, and others have turned an exposed ureter into the bladder, this is probably the first case in which this manipulation has been successful in a subject so young.

GYNÆCOLOGY.

CASE OF ACQUIRED ATRESIA HYMENALIS.

In the *Australasian Medical Gazette* for June, Henry Forbes, M. B. et Ch. M. Aberd., relates the following history: E. S., thirty years old, domestic servant, single, was admitted, on the 2d of January, 1891, into the Charters Towers Hospital, complaining of dysuria and a swelling of the abdomen. Two days before, she had seen Dr. Browne, who sent her here.

She said she had enjoyed very good health at home, but since her arrival in Queensland she had suffered more or less from debility, though not enough to interfere with her work. She had been an inpatient at the Towers Hospital in June, 1890, when I attended her for a specific sore throat and a papular rash. Some time before this she had had a vaginal discharge following coitus, and afterward a swelling in the groin. These were treated by a doctor, but he can give me no particulars. I examined her at that time for the rash, but I did not notice any abdominal enlargement. Quite recently she had been Dr. Browne's patient for arthritis of the ankle, but complained of no abdominal inconvenience till a day or so before admission. She first menstruated at twenty, and has been very irregular throughout, sometimes missing several months. Her menses lasted usually a day, were very scanty, and were accompanied with great pain. Since her first admission into the hospital in June, 1890, she has not seen anything, and she thinks not for some time before; possibly not since she last indulged in sexual intercourse, the result of which was the vaginal discharge.

On admission, her ankle was swollen and walking difficult, the left thigh œdematous and tender, urination frequent and painful, and a large swelling occupied her abdomen, extending well above the umbilicus. A catheter showed the urethra and bladder normal. Rectal examinations: a tight, rounded tumor, filling the pelvis and flattening the rectum against the sacrum, and vaginally the finger encountered an elastic swelling bulging between the majora and yielding to pressure. At the upper part of the distended hymen were some cribriform markings, but no visible cicatrix. On abdominal palpation was felt a large, tense swelling, rising out of the pelvis, extending almost to the umbilicus, and continuous with a smaller and harder tumor that reached two inches above the umbilicus, and was of the shape of the enlarged uterus. From the upper angles of the smaller tumor could be distinctly traced two hard, cord-like bodies, extending one toward each iliac fossa, and ending in ovoid enlargements. Percussion over the umbilicus gave a distinct thrill to the bulging hymen, and a

hypodermic syringe introduced into it withdrew the characteristic tarry fluid of retained menses.

Dr. Browne and Dr. Paoli saw the case, and we agreed to tap. The smallest trocar was entered a little above the center of the hymen, and the fluid was very slowly withdrawn. After it had ceased to flow, a bistoury, guided in on the cannula, made a permanent opening. A large uterine irrigator was introduced into this, and the vagina—enormously dilated—was washed out with a hot saturated solution of boric acid till the fluid came away clear. The opening was dressed with salicylic wool. The syringing was continued daily for the next ten days; the discharge, which never became offensive, ceased in five, and the temperature on the two nights following the operation just reached 100° and then became normal.

The patient never had any abdominal tenderness, was kept in bed for three weeks, and at the end of that period menstruated freely and easily.

Vaginal examination immediately after the operation showed the vagina to be an immense cloaca filling all the pelvis, and the finger could detect at the top a large ring of soft tissue representing the changed cervix. I examined her on Saturday, the 4th of April. The hymenal opening is now quite patent, the vagina has almost recovered its usual shape and consistence, but the cervix is still soft and swollen (though much smaller), and the os admits the tip of a small finger. Her menses are now regular and easy.

Notes.—1. Acquired atresia of the hymen or the lower part of the vagina seems to be rather a rare condition. Dr. Matthews Duncan, in his *Clinical Lectures*, says: "Sometimes the vagina becomes closed by the healing of sores, the result of sloughing from pressure during parturition, or the reselt of syphilitic infection; but though cases of stricture, more or less tight, and having a small lumen from these causes, are not uncommon, I have not seen one of complete closure (atresia), with retention and accumulation."

In this case I should think the atresia was produced either by the healing of a syphilitic sore (though no scar was visible), or by the efforts at intercourse producing inflammation of a tough hymen with possibly a very small opening.

2. The total absence of subjective symptoms. She never noticed her increase in size even till the dysuria called her attention to it.

3. The fluid removed measured sixty-five ounces. Duncan says the quantity of accumulation varies much; that in his own practice he never saw more than fifty ounces, though he had heard of a well-authenticated case which had one hundred and five ounces.

THE ULTIMATE RESULTS OF VAGINAL HYSTERECTOMY FOR CANCER.

Leisse (*Archiv fur Gynäkologie*, Band xl., Heft 2) replies to the criticisms of the statistics of the Dresden clinic by presenting a tabulated statement of the histories of all the patients, so far as they could be obtained. These are compiled with great care. Of eighty patients who were heard from upwards of two years after the operation, 56.25 per cent. were still living. Since eight of the deaths were not due to a recurrence of the disease, this leaves the actual mortality only 17.8 per cent. Thirty-seven of the forty-five surviving patients were examined at the clinic, so that there was no question as to their local condition, and in the other cases reports were received from competent physicians. The following are the facts: Of eighty patients examined over two years after operation, forty-five were free from recurrence; 58.6 per cent. (out of fifty-eight patients examined) were well after three years; 59.5 per cent. (out of forty-two) after four years; 60 per cent. (out of thirty) after five years; 66.6 per cent. (out of nine) after six years; and the two patients who had survived the operation seven years were both perfectly well.

COMPLETE AMENORRHŒA IN A FERTILE WOMAN.

Dr. Marion Dunagan (*Archives of Gynæc.*, August, 1891) states that a pregnant colored woman, already the mother of ten children, assured him that she never menstruated in her life, and was 19 years old and the mother of two children before she knew that such a phenomenon occurred in women. She was an unusually stout and healthy woman, did hard work constantly for her living, and the only inconvenience that she experienced was an occasional swimming in the head, which was but trifling. Dr. Dunagan holds this case proves conclusively that menstruation and ovulation are not essential to nor dependent upon each other.—*Brit. Med. Jour.*

OBSTETRICS.

EARLY CURETTING IN PUERPERAL INFECTION.

M. Charrier discusses (*Archives Générales de Médicine*, August, 1891) early curetting as a prophylactic and therapeutical measure in puerperal infection. It is only of recent years that the uterus after delivery has been looked upon as a wounded surface, and the difficulty of keeping this wound healthy and aseptic is shown by the not inconsiderable number of women in whom delivery, and more especially abortion, has been the starting point of a number of more or less serious accidents. The fever may be of short duration, and the infection an attenuated one, but as soon as the patient returns to her ordinary life the trouble begins. Most often the operation of early curetting is one of urgency, and there is little time for preparing the patient. M. Pozzi looks upon repeated shivering, a temperature of over 39° C. in the axilla, the general state of the patient, the pulse, etc., as affording pressing indications. The curetting is done in much the usual way with strict antiseptic precautions and with great gentleness, a blunt and non-cutting instrument being used. The uterus is washed out, and the cavity tamponed with iodoform gauze. Anæsthesia is not necessary. The amount of fœtid *débris* brought away may be extraordinary. The author says that this treatment is indicated in cases of slighter infection, when abdominal tenderness, less marked fever, and fœtid lochial discharge are present. Antiseptic injections may render the *débris* powerless from a bacteriological point of view, but such patients do not thoroughly recover. The objections raised against this treatment are that intra-uterine washing out is most often sufficient; and, secondly, the supposed gravity of curetting the uterus after delivery. But if anything remains behind in the uterus these injections cannot be counted upon; and, again, if the operation is done with care, it is never followed by evil consequences. Puerperal accidents, rare nowadays, will no longer be feared if washing out the uterus and curetting be used. If this treatment of puerperal infection has not as yet passed into practice it is because it has been adopted too late in the case, or has not been carried out with the necessary precautions. If this be done, the maladies of the uterus and appendages appearing later will be diminished in numbers. M. Charrier gives details of five illustrative cases.—*Brit. Med. Jour.*

INDICATIONS FOR CÆSARIAN OPERATION.

Piskacek (*Arch. d'Obstet. et de Gyn.*, April, 1891). In absolute contraction of the pelvis the author pronounces himself in favor of the Porro operation. His reason is the danger of a second Cæsarian section in the event of a new pregnancy and the risk of uterine rupture should the operation not be done immediately at the onset of labor.

In pelves flattened less than to 7½ c.m. and in pelves generally contracted to 7 c.m. neither version, perforation nor the conservative Cæsarian section is to be thought of so long as the time for premature labor has not passed.

If the pelvis has a diameter of less than 7 c.m. he advises Porro (on election of the mother) to prevent a subsequent pregnancy. If the woman rejects abdominal section, even though the child cannot be saved by induced labor, the latter operation or induced abortion must nevertheless be done in the presence of absolute contraction.

Podalic version as an alternative of section on the relative indication, an atypical application of the forceps or embryotomy on the living child will the more rarely be the choice of procedure the less time is lost in waiting. With the primipara version must never be preferred. With multiparæ it must be resorted to only in the most favorable conditions.

The author thinks the infantile mortality of craniotomy is compensated in a year by the possibility of having a living child in another pregnancy and the fact that women after Cæsarian section do not readily become pregnant again, to say nothing of the mortality of the Cæsarian operation. Thus Cæsarian section is conservative only in certain conditions, that is to say in conditions favorable to the operation, for example when a living birth is impossible at or near term, per vias naturales, when the mother desires expressly to have a living child and assents to the operation after the danger has been fully explained to her.

In the main Piskacek employs Cæsarian section in multiparæ only when they have lost their children in previous births. In primiparæ there can be no question when there is at the beginning of labor a rigidity of the cervix that threatens rupture of the uterus. In all other cases he considers per-

foration practiced upon the living fœtus not only legitimate but imperative. Only the conservative operation of Saenger and not the Porro can come in competition with perforation.

A CHILD CRYING IN UTERO.

Dr. McLean reported the following case: (*Trans. N. Y. Obstet. Soc.*) In August last, I was called to see Mrs. S., æt. 30, in labor at term with her fourth child. The waters had escaped, and while rectifying a malposition of the head by the insertion of the hand to the pelvic brim, atmospheric air was admitted to the uterus, and the child commenced respiration and crying in utero. The occiput was turned forward. While I was applying the forceps, the child was crying lustily, the voice sounding as if coming from the cellar. Others heard it, and it was curious to note the consternation in their faces. This crying was kept up for four or five minutes, when delivery was safely accomplished. The mother and child did well. The air was expelled with the secundines. I had never known such a thing to occur. The case is entirely different from those cases frequently seen of spasmodic cries while the child's head is in the vagina; the head was in the uterus and in fact slipped away from my hand several time,s crying all the time. This phenomenon was witnessed by Dr. Tracy and the nurse present.

PÆDIATRICS.

SPURIOUS WHOOPING-COUGH.

Prof. Hobart A. Hare in a lecture at the University of Pennsylvania, said: You are probably aware that whooping-cough, while always existing in large cities in sporadic cases, occurs, as a rule, in epidemics which may be long-continued or short in their duration. At the present time this city is thus afflicted, and during the early spring months of last year a large number of cases were presented at this clinic. You have, in consequence, seen so much of this disease that I should not have brought this boy before you were it not to show you an aberrant form of pertussis, if we can so designate it. The child, who is 5 years of age, has been suffering with a spasmodic cough without the development of any whoop for some four weeks, and has not lost its appetite, strength or sleep during that time. While the cough frequently occurs at night, the patient is only partly aroused, and, as soon as the spasmodic expiratory movements cease, falls back on his pillow and is at once in slumber. On only one or two occasions have the spasms interfered with the breathing sufficiently to alarm the parents, and these only lasted for a few moments. There has not been vomiting, conjunctival or aural hæmorrhage, nor any nose-bleed, all of which symptoms may appear in cases of well-developed or severe whooping-cough. Practically, then, the only thing we are asked to do for this child is to discover the cause of the cough and to remove it, if possible. As you are probably aware, cough is a frequent symptom of many conditions not directly affecting the air passages, and it may arise from gastric disturbances which are acute or chronic, from intestinal irritation, from the drying of the mucous membrane of the larynx by the heat of fever, and in other cases it may be a habit which is as difficult to cure as chorea. Cough may also be due to relaxation or hypertrophy of the uvula, to enlarged tonsils and nasal disease. Besides these causes we have, of course, the acute diseases of the respiratory system. On examining this boy, however, we find that none of those conditions predisposing to cough can be said to exist, and the lungs are perfectly normal, while the bronchial tubes contain very few râles which are not constantly heard. As I have already told you, his appetite and general health are unimpaired; and his tongue, you notice, is unusually clean and devoid of those appearances indicating gastric or intestinal trouble. He is not a nervous child, and has never had chorea or any nervous affection. The cough is not a habit cough, as it is too violent and prolonged, and the expiratory efforts are so frequently repeated before inspiration occurs that some cyanosis or reddening of the face occurs. The case lacks all the other signs common to whooping-cough except this series of expiratory spasms; and the chest, as I have stated, is free from the signs of bronchitis, nearly always accompanying this disease to greater or less extent. Having told you everything that the case is not, you are probably waiting for a description of what it is. So far as I am able to determine, it is a case of spurious or abortive whooping-cough, a diseased condition which seems to have been quite common during this month and last, for I have seen several other cases which were equally marked. Very recently, Guido described to the Italian Congress of Pædiatry (Rome, 1890) a form of paroxysmal and spasmodic cough which resembles whooping-

cough, and yet which is not the true disease. He noticed a great number of these attacks during the epidemic of influenza, and the following distinguishing features were noted:

There was a greater frequency of the attacks at night than in the day, there was almost never any vomiting, and the signs of bronchitis were less disseminated than is usual in whooping-cough. There was absence of hæmorrhage and of the bacillus of Afanasieff, which, you remember, is supposed to be pathognomonic of pertussis. In five autopsies there was found a lesion in the pharynx and not in the larynx. The treatment consisted in the administration of antispasmodics, the bromides and those measures which are generally employed against true whooping-cough.

Gueneau de Mussy has also recognized a pseudo-pertussis which is practically indentical with that of Guido and thinks it a symptom indicative of reflex irritation of the pneumogastric nerve following direct irritation of lymphatic ganglia. Indirectly it may arise from hypertrophy of the nasal mucous membrane, and Tasano states that he has seen a case in which cure followed the excision of the hypertrophied tissue. These cases seen by Tasano, if accompanied invariably by nasal lesion, can only be considered as reflex coughs, and rarely the disease of which we are speaking. If due to nasal hypertrophies, the cough should be constant, but in all the cases named it has run a definite course of five or six weeks.

I do not know what to consider the cause of the attack in this child, unless it be some state coincident with the conditions consequent upon the recent epidemic of la grippe, which is even now scourging our Western cities. This, as I have just stated, is the opinion of Guido in regard to his cases. The treatment is identical with that usually employed in whooping-cough—namely, full doses of antipyrin or acetanilide three times a day, accompanied by one grain of tannate of quinine in a quinine chocolate morning and night. By full doses of antipyrin and acetanilide, I mean one grain of the former and one-half grain of the latter at each dose for a child of five years. If cyanosis comes on, the dose must be decreased. Small doses of the bromides are also of service. Lactucarium is useless except in the form of the syrup as a vehicle.—*Ann. Gynæ. Pæd.*

EPIPHYSEAL FRACTURES IN THE TREATMENT OF WHITE SWELLING.

Iscovesco (*Rev. Mens. des Mal. de l'Enf.*, May, 1891) has observed epiphyseal fractures in two cases of coxalgia, and in two cases of white swelling of the knee, which were produced during attempts at treatment of the joint. He draws the following conclusions:

1. In certain cases of chronic articular disease there is true softening of the contiguous epiphyseal cartilages.

2. In the four cases referred to the children were under ten years of age.

3. In none of the cases did the fracture of the epiphysis appear to affect the prognosis unfavorably.

4. When this accident occurs it is necessary to treat the limb by immobilization with extension in a favorable position.

5. In the cases referred to, not only did the fractures undergo favorable evolution, but they seemed even to have a favorable influence upon the evolution of the articular disease, so that it is an open question whether osteoclasis of the contiguous joint might not be a favorable adjunct in the treatment of white swelling.

HYGIENE.

PARASITES IN MALARIA.

Since Laveran discovered a parasite in the blood of several patients suffering from malarial fever ten or twelve years ago, many other observations on this interesting subject have been made both by himself and by many other writers, Continental, American, and Indian. One of the latest papers on the subject is a dissertation by Dr. Romanovski, of St. Petersburg. He thinks that the malarial parasites are so inseparably associated with the disease that the blood of patients supposed to be suffering from malaria ought to be examined as a matter of routine, as the sputum of phthisical patients is, for microbes. He finds that the amœboid parasite of tertian fever has a nucleus which acts by means of a fibrous metamorphosis of the chromatin network, and not by a direct method. When quinine is administered in sufficient doses it causes the destruction of the amœboid parasite, the degeneration, which is easily observed, chiefly affecting the nucleus. With regard to the prescription of quinine, he says that it should be given in two doses of about fifteen grains each during the twelve hours immediately preceding the attack, because during that period the number of adult parasites is at its maximum. From some observations made with tincture of sunflower Dr. Romanovski was led to the conclusion that

this drug, though not without its influence on malarial fever, cannot be considered as a satisfactory substitute for quinine. He appends to his work references to more than 120 articles bearing on the subject, some few of which are in Russian, but the great bulk are in more accessible languages.—*Lancet.*

IS TYPEWRITING INJURIOUS TO THE EYES?

In this age of typewriters, the question suggested is one of interest, at least to eye specialists.

In a letter to the *New York Medical Times*, Dr. Geo. L. Freeman discusses the fallacy of the current opinion that typewriting is necessarily injurious to the eye.

As indicative of what expresses the present opinion, we quote the following paragraph which has been going the rounds of the medical press:

Almost every typewriter, sooner or later, has trouble with his eyes. The typewriting machine is supposed to save the eyes, but the effect is quite the contrary. The eyes are all the time in motion while writing, and the rapid jerking of the eye from one point to another on the little keyboard soon tires the muscles and makes the eyes, and sometimes the whole head, ache. Then a great many girls have the habit of turning up the carriage to see what has been written, and leaning back in the chair while reading it. This, too, is bad, for the reason that it requires a rapid adjustment of the eye to the different distances, and so tires the whole organ. The only way to save the eye when using a typewriting machine is to acquire such facility that it is not necessary to look at the keyboard, and the eyes will be saved the thousands of little jerks to and fro which do so much harm.

Dr. Freeman then cites his own experience as follows:

I have been using a typewriter for about ten years, and during the latter half of this period with the left hand alone, the right hand being disabled. I was first led to try the machine by reading a very emphatic testimonial in its favor by the eminent English ophthalmologist, R. Brudenell Carter, who stated that he had found it of the greatest assistance to himself, and especially recommended it in cases where the sight was weak or imperfect in any way. This should be almost enough to settle the question, even if the above quoted objection founded on *eye-jerking* were not so palpably nonsensical. But I would invite the contribution of further evidence on this point, both from specialists and professional typewriters. I do not believe that "almost every typewriter has trouble with her eyes"—or *his*, either. Are not most people, while awake, constantly adjusting the organ to different distances, with as much rapidity as when looking at "the little keyboard?" From my own experience, I am firmly convinced that physicians, instead of finding fault with these admirable contrivances, ought to be the strongest advocates of their more extended employment.—*Medical Age.*

MEDICAL CHEMISTRY.

A NEW ALBUMEN TEST.

In *Fresenius' Zeitschrift für Angewandte Chenue*, Dr. A. Jolles gives the following test for albumen in urine, which he claims to be sensitive to within one one-hundredth of one per cent. of albumen. To 10 ccm. of the suspected urine add an equal amount of strong hydrochloric acid. Do not agitate the mixture, but immediately add with a pipette two or three drops of liquor calcis chlorinatæ. If albumen be present, a white turbidity will at once show itself in the upper part of the tube.

METHOD OF DISTINGUISHING THE BUTTER OF MARGARIN FROM NATURAL BUTTER, WITH NITRATE OF SILVER.

By this reagent, M. Brulle has succeeded in distinguishing the butter of margarin. Treated by this reagent, natural butter preserves its color, while pure margarin becomes brick red. This latter tint is less apparent when treating a butter to which margarin has been added; nevertheless, the practiced eye can readily recognize a mixture not containing more than 5 per cent. of margarin; with 10 per cent., the red tint is very pronounced.

GALLATE OF BISMUTH, OR DERMATOL.

Under the singular name of "dermatol," Dr. R. Heintz, a medical practitioner residing at Breslau, designates a chemical preparation which is said to be quite new, namely, the *basic gallate of bismuth*, and he recommends this compound as an antiseptic capable of being employed as a substitute for iodoform in the dressing of wounds and

ulcers, etc. The basic gallate of bismuth, or dermatol, presents itself as a fine, absolutely inodorous powder of a saffron-yellow color. It is non-hygroscopic, and appears to be quite unaffected by exposure to light and to the air. As this compound is insoluble in ordinary liquids, it can only be employed as a powder. Besides its antiseptic properties, which are said by Dr. R. Heintz to be strong, he claims also for it a stimulant and astringent action, which makes it valuable in the treatment of wounds and ulcers, and tends to hasten their cicatrization. He states, moreover, that, "on account of its insolubility," poisoning by it is impossible; but sulphate of baryta, which is a perfectly insoluble powder, acts as a poison and has been used for killing rats, etc. Dermatol, we are assured, does not produce any local irritation whatever, and, according to the writer above named, it may be substituted for iodoform in all cases where the latter is indicated, and may actually be used internally, he says, in the dose of 30 grains per diem, in diseases of the digestive tract, especially in the profuse diarrhœa which is present in catarrhal and ulcerous affections of the intestines. That we have here a new and non-irritant powder, supposed to possess strong antiseptic powers and to possess astringent qualities, no one will deny; but that it will replace iodoform in all its indications is saying more than any practitioner will accept, though it may prove equal to the latter in the external treatment of ulcers, and prove applicable in certain cases, for instance in diarrhœa, where iodoform would not be prescribed. In this instance it would be calculated to replace the subnitrate of bismuth with advantage, as being more astringent and perhaps possessing greater antiseptic powers.—*Monthly Magazine.*

NEWS AND MISCELLANY.

CINCHONA CROP OF 1890 IN JAVA.

The official report of the government cinchona plantation in Java states that the crop of 1890 amounts to 534,562 pounds, 142,396 pounds being cinchona succirubra, 6,447 pounds cinchona Josephiana, 342,271 pounds cinchona ledgeriana, and 43,448 pounds cinchona officinalis; 100,000 pounds of bark were collected in the first quarter of 1891. The bark sold at Amsterdam out of the crop of 1890 sold for 1½ pence per unit for common kinds. The cinchona ledgeriana brought good prices, and even better ones were realized by the bark of the cinchona succirubra, viz., up to 2s 4d per pound. The "Melattie" Company's cinchona plantations in Java have done well in 1890, and the shareholders receive a dividend of 11 per cent., after placing £250 to reserve, and writing off £166.

THE CHINESE TREATMENT OF HYDROPHOBIA.

A Chinese journal, referring to the dangers of hydrophobia, points out that the European doctors have not yet discovered an effective treatment for this disease. In order to determine whether the disease is really hydrophobia, the following method is recommended by a Chinese contemporary for this purpose: Get a gong or any large brass utensil and strike it before the patient. If he is suffering from hydrophobia he will at once show signs of madness; then fan him with a large palm-leaf fan, and he will crouch down as if in great fear. When the presence of the disease is thus ascertained, the next step that should be taken—a most important one—is to search the hair of the patient. There will certainly be found one hair of the color of vermilion, and rather stronger and coarser than ordinary hair. This particular hair should be entirely pulled out, not even the smallest part of the root must be left, otherwise the disease cannot be cured. When this has been done a prescription must be prepared, and the drugs used should be of such a nature as will expel the poison from the place in which it is.—*Brit. Med. Jour.*

CHOLERA IN CHINA AND JAPAN.

That dreaded scourge, the cholera, a correspondent writing from Shanghai, China, says, is rapidly beginning its annual ravages. It had been confidently hoped that as the summer passed and few serious cases of the plague occurred, the year might run by without the fatality which has overtaken Chinese cities in past years. But within the past fortnight the disease has been gaining headway rapidly, and already seven Europeans are known to have suddenly died from cholera. That the disease has been playing havoc in the native-crowded cities has been known, but its attacks upon foreigners, who had thus far managed to ward it off, is something almost unprecedented, and augurs badly for the settlements of foreigners along the Chinese coast.

Physicians who have been familiar with Asiatic cholera in all its forms for several years think that unless the winter season with its frosts sets in early and checks the spread of the plague the mortality during September and October bids fair to be very great, probably surpassing that of the same months of last year. The hot, dry summer which Eastern China has just experienced, and the consequent illnesses of the mass of the people, have rendered them particularly liable to catch the germs of the disease and their constitutions little liable to withstand its ravages.

At Amoy and Foo-Choo the number of daily deaths is, indeed, alarming, and at Foo-Choo, a large city near Shanghai, the mortality has been much more serious than during last summer, when it raged so terribly throughout this region.

In Japan, also, the returns show a gradual increase in the number of deaths in the larger cities, Nagasaki heading the list. On account of the great loss experienced last year by the disease checking the usual influx of summer visitors and the trade of foreign steamers, the Japanese authorities are trying to keep the spread of the cholera from public knowledge, and it is only from private sources that the true state of affairs is known. The Japanese seem to be as subject to the disease as the Chinese, and the mortality seems almost as great, in spite of the better climate and medical aid with which Japan is equipped.

THE APPETITE OF OUR ANCESTORS.

Although our modern ways of cooking are more refined, and all sorts of spices are employed to whet our appetites, it is a lamentable fact that we cannot approach our ancestors in the amounts of food with which they were able to regale themselves.

The Journal de la Sante cites the following from an old book on cookery, dated 1523:

"On the 6th of August of this year a certain nobleman dined, as was his custom, in the apartment of his wife. The dinner was an ordinary one consisting of two services, one of which was partaken of by all the servants. There were a few guests. The meal was simple but substantial. First service: boiled capon, breast of mutton, a piece of beef and kid, a swan, a pig, a breast of veal, roasted capon, custard. Second service: Pullets, quails, pigeon, a venison pie and several tarts."

To illustrate the vigorous appetite of the women of those times, the following is quoted from the same book: "On the 24th of October of this year, two ladies breakfasted on the following: A piece of beef, a goose, sweet-breads and a capon." That is not bad for a simple breakfast.—*Dietetic Gazette.*

ENORMÓUS MICROSCOPE.

The Poeller Physical Optical Institute, of Münich, have under construction an enormous microscope for exhibition at Chicago in 1893. It will magnify to 16,000 diameters, or, as ordinarily fitted, to 11,000 diameters. An electric light of 11,000 candle-power is to be used for illuminating the image, which is to be projected on a screen. As the heat from this powerful light would derange the focus by expansion of the metal, an ingenious device is used to cool the metal. This is a small copper cylinder filled with liquid carbonic acid under a pressure of 350 pounds to the square inch. It is connected with the microscope in such a manner that an electric regulator automatically opens a valve and allows a drop of the acid to escape in a spray on the metal to be cooled. The liquid immediately evaporates and produces intense cold. The whole cost of the instrument is said to be nearly $10,000.—*Scientific American.*

HOW TO LAUGH AT THE MOSQUITO.

I notice that some one recommends the use of camphor against the mosquito nuisance. I have used camphor for this purpose for some time, though I have not found it necessary to burn it. I take a piece of camphor fully an inch square and half an inch thick; this I lay on the bureau—always exposed—in daytime, and on or near the pillow at night. This is the only remedy I ever tried that afforded thorough relief. Even a mosquito bar lets the mosquito in and bars the air out. Have two windows and door of the room wide open, no bars, and draft through. Have not been annoyed by mosquitoes since using the camphor, except to a very light extent for a night or two in case of storm and unusual draft through the room. I think then an additional piece or two of camphor would have prevented that. The mosquito has been a great annoyance to me, but I feel that I can now laugh at him. If others find the remedy as effectual as I have it will be a boon.—*Exchange.*

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Clinical Lecture.

THE DIAGNOSIS OF INFLUENZA.

BY JAS. M. ANDERS, M. D.,

PROF. OF THEORY AND PRACTICE OF MEDICINE AND CLINICAL MEDICINE AT THE MEDICO-CHIRURGICAL COLLEGE.

Gentlemen: The man before you, A. D., aged 42 years, carpenter, had bronchitis a short time prior to an attack of la grippe last winter. He presented himself at the hospital a few weeks ago giving us the following history: The present attack came on suddenly with severe chills, fever followed by profuse sweating, headache, pain in the limbs and great physical prostration. When you leave these halls next spring and enter into practice for yourself, you will meet cases presenting themselves to you with a history very similar to this, and which cases you must distinguish from the "grippe," for many will suppose themselves to be suffering from this disease. The energies of an epidemic of la grippe are expended in from two to four weeks, and it does not recur in the same place for several years as a rule. Hence you will only rarely meet with it. True, there will be sporadic cases, but most of the self-diagnosticated cases you will meet with next spring and the following winter you will after careful study look upon as cases of ordinary catarrh. The cause of la grippe is a specific poison which rapidly reproduces itself in the atmosphere, a fact that accounts for the rapid spread of the disease.

It affects all persons in all conditions of life, though the feeble and the aged are first affected. It occurs in two forms, mild and severe. The mild form is more liable to occur in persons who have been previously in good health. The severe form in persons previously run down, and is apt to leave the system, particularly the nervous system, more vulnerable, and is characterized by an exaggeration of the leading symptoms with especially greater physical prostration.

There may be said to be three forms as regards classification of the symptoms, namely, nervous, abdominal and catarrhal. In the nervous type there is more physical prostration, severe pains throughout the body, much headache, especially over the root of the nose. The abdominal type is especially liable to occur in children and is attended with vomiting and purging. In the catarrhal form there is a dry, racking cough with little or no expectoration. The complications liable to occur are capillary bronchitis followed by collapse and consolidation. The sequelæ are phthisis and chronic bronchitis. To diagnose ordinary bronchitis from that occurring with la grippe, you must pay attention to the history as well as the physical signs and symptoms. The bronchitis with "grippe" is attended with more fever, harder cough, less expectoration occurring during an epidemic, irrespective of seasons without history of exposure or change of temperature. In ordinary bronchitis you have the history of exposure to cold or wet, and most cases occurring during the winter and spring months and absence of epidemic. The symptoms which this man suffered from during his attack were those of a severe cold, great physical prostration and pains throughout the body. He now has more cough than during the primary attack. Last spring he was treated at the Dispensary, improved. Some weeks ago he again presented himself when I made a careful examination of his chest and found evidences of phthisis; had a specimen of his sputum examined and in it were found the tubercle bacilli. Now, how far does "grippe" influence the development of phthisis. In cases where a marked predisposition exists grippe, especially if not properly met, will be likely to be followed by this dreaded disease.

When chronic bronchitis previously existed, as in this case, phthisis is liable to be produced. There is another disease liable to

be confounded with grippe, viz., typhoid fever. Indeed, patients often present themselves imagining they are suffering from grippe when they are really starting with typhoid. They will complain of pains throughout the body, physical depression, loss of appetite, chills, fever. In grippe the fever will not have the insidious onset nor show the same regular rise during the early stage, neither will there be the enlarged spleen nor the abdominal eruption. Turning now to the physical examination of this patient we find on inspection depressions above and below both clavicles and less movement on the left side over the same area. He is also much emaciated. Palpation—vocal fremitis more marked on the left side; normally vocal fremitis should be more on the right side. This then would indicate some consolidation on the left side. Percussion—there is no difference in favor of either side, this also indicates a slight degree of consolidation of the left lung where the percussion note over right apex is natural because normally there should be more pulmonary resonance on the left side. Auscultation—I do not hear any rales, but bronchovesicular breathing on the left side, an increase in the bronchial element. A lessening of the vesicular. We, therefore, are justified in concluding that he is suffering from insipient phthisis or tubercular infiltration probably as a result of the grippe. The treatment of grippe might here be briefly mentioned. It is symptomatic. Quinine should be given in pretty stiff doses for its tonic effect, to keep down the fever and for its controlling action over the catarrhal process; morphia controls the laryngo-bronchial irritation and thus allays cough and produces sleep. Another good remedy in the bronchitis of grippe is the muriate of ammonia in doses of gr. x every two hours. In the present case we should endeavor to arrest the tubercular process. The best remedy we know of for this purpose is creosote beginning with moderate doses and gradually increasing until the system becomes well saturated. I shall order him creosote half a minum four times a day. As a tonic and reconstructor of tissue, we shall also prescribe the compound syrup of hypophosphites. The diet shall be generous, especially milk, eggs, tender meats, etc. He should spend as much time as possible in the open air. In conclusion, I should like to insist that you treat the sputum of these patients antiseptically as a precaution against spreading the disease through contagion.

COMMUNICATION.

TREATMENT OF LARYNGEAL PHTHISIS.*

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The treatment of laryngeal phthisis is of absorbing interest, and largely on account of the great strides that have been made in the last decade. Compare the writings of ten years ago, of Morrel Mackenzie, Browne, Schnitzler and many other prominent and conservative men with their words of to-day, and if they do not give so sanguine an outlook as those of more enthusiastic writers, there still appears such marked feelings of hope, that despair, at any rate, has disappeared. In 1880 Mackenzie[1] said, "the prognosis of laryngeal phthisis is always extremely unfavorable, and it is not certain that any cases ever recover."

To-day his words[2] are at least hopeful. Heinze[3] in 1879, said, "a cure of laryngeal tuberculosis will probably never be obtained." To-day Sedziak[4] says, "the curability of so-called laryngeal phthisis is undoubtedly possible," and "partial recovery from laryngeal phthisis, viz., the cicatrization of single ulcers, must be considered not only as possible, but even apparently often obtained." When we study the literature on the curability of this disease we find that rare cases[5] of cures are reported as having occurred without treatment, *i. e.*, spontaneously. Sokolorvski[6] even says he has seen many cases of spontaneous cure of phthisical ulceration of the larynx and Mr. C. J. Symonds[7] goes so far as to make spontaneous recovery "a strong argument against local treatment." With the aid of local treatment, there seems to be even less diversity of opinion as to the curability of this affection, although many more cases of partial cure, *i. e.*, cure of single ulcers, have occurred, than of complete cure. However, when we read of such specimens as Krause[8] and Sajous[28] show, in which, after death, microscopical examination proved the cases cured, we can no longer doubt its possibility. And, indeed, I am strongly inclined to the

*Read before the Colorado State Medical Society, June, 1891.

belief that partial cure or healing of single ulcers, which I also have often observed, ought not to be pronounced cures. One cannot be absolutely certain of a permanent cure unless the patient, dying from pulmonary consumption or other intercurrent disease, presents a larynx, which on microscopical examination reveals no indication of tuberculosis.

In a discussion following the reading of Dr. Rice's[9] paper before the American Laryngological Association, 1889, but one gentleman[10] expressed a decided opinion that laryngeal tuberculosis could be cured, while four[11] expressed decided doubt. Still, despite many doubts as to the actual curability of this disease the fact remaining that partial cures are frequent, has given us hope, where formerly existed only despair, has led us to increased energy, and has given our patients much comfort instead of constant suffering. For these blessings we have to thank new methods of treatment. I need but to quote Robinson[12] (1879) in proof—"I for one, affirm emphatically that all caustic substances are radically wrong when applied to the ulcerated laryngeal surfaces of phthisis." Compare this statement with articles of to-day on the subject, teeming as many are with recommendations of lactic acid, chromic acid, galvano-cautery and other harsh remedies. True, there is still a minority who discourage irritating measures, but we believe they will yet join the majority. The treatment resolves itself into prophylactic, curative and palliative:

Prophylactic.—We can not emphasize too ardently the many rules laid down for the prophylaxis of pulmonary tuberculosis, viz., proper climatic conditions, perfect sanitary surroundings, the disinfection of sputa, etc. But pertaining directly to laryngeal phthisis, whether primary or secondary, the hygiene of the upper air passages, I believe, is a most important factor. I rarely see a case of pulmonary consumption that does not present some abnormal condition of the nose, pharynx or larynx, irrespective of any tuberculosis tendency. That each case of phthisis shall breathe properly through the nose is of paramount importance in preventing a chronic catarrhal laryngitis, which having once obtained furnishes good soil for the development of tuberculous laryngeal complication. Thrasher[93] calls attention to this fact, although his article was unknown to me until after writing the above.

Curative.—In speaking of remedies for the cure of this disease, we bear in mind those which have been known to have produced partial cure as well as complete cure. The measures can be divided into local and general, the former being of even greater value than the latter. In this view we believe with Daly[13] who said, "if I were to be denied one or the other in the treatment of tuberculous ulceration of the larynx, I should certainly elect to be deprived of the constitutional treatment." The local remedies are of three kinds, viz., medicinal, surgical, and a combination of these two in the treatment with lactic acid. *Medicinal.*—The remedies used in the form of sprays, insufflations, inhalations, and applications directly to the larynx by cotton sponge, or brush are so many, that no one man can treat sufficient cases with each, to prove or disprove its efficiency. I mention a few of the less important ones which have given satisfaction to some, but which I have never even tried. Masucci[14] believes that *calcium phosphate* is preferable to iodoform or lactic acid. Guinier[15] lauds *sulphur water*, particularly those of Raillére Springs, as producing an improvement, and even cure, in tuberculous ulcers of the larynx.

Pyoktanin has been applied by Scheunmann[17] who claims to have cured some cases of laryngeal phthisis with this remedy. *Balsam of Peru* has produced improvement, but no healing in a series of experiments by Prof. Simonoosky,[18] and Schnitzler[19] has seen benefit from the same remedy. Inhalations of hot air have produced no effect according to the experiments of Moser[20] and of Nykamp,[21] while Fournier, mentioned by Sedziak,[22] recommended them. *Creolin* and *B-Naphthol* have proved of very little value in the hands of Favitsky.[23] Bassols Prim[24] recommends inhalations of oxygen as a parasiticide. *Resorcin* has been used by Frounstein[25] and by Fronheim,[26] the former showing several very flattering results, the latter preferring it to cocaine to relieve pain. This has been a rather favorite remedy with me to diminish the discharge in chronic inflammations of the upper air passages, and I have found that the co-existence of laryngeal phthisis is no contra-indication to its use. The distressing symptoms due to increased secretion may be relieved, but only temporarily, by a spray of a ten per cent. solution of resorcin.

For years I have used a solution of *Tinct. Ferri. Chlor.* ʒj to ℥j of water as a spray in those cases of laryngeal phthisis with slight thickening over the arytenoids and a congestion of the vocal bands. While this remedy acts very slowly, it nevertheless has done much in my hands towards restoring

the voice in such cases. The only reference I can find to any iron preparation in this disease is in the very admirable article by Sedziak,[27] who speaks of Morrel Mackenzie using a solution of 1 to 30 of ferrum sesquichloratum.

The above list comprises only a few of the long line of medicaments used. It would be only tiresome and of little worth to recount any more. Three remedies however remain, that are, I believe, to be of more value than any already mentioned and that vie for supremacy with all known means of local treatment. These I wish to speak of at some length; they are *menthol*, *iodoform* and *iodol*.

Menthol.—Dr. A. Rosenberg first called attention to this drug in diseases of the nose and throat in 1885. His object was to find a remedy to take the place of cocaine on account of the latter's costliness[29]. Menthol answered admirably, and continuing his experiments he presented in several succeeding articles[30] a most flattering experience on its use in laryngeal phthisis. He uses preferably a ten to twenty per cent. solution in olive oil, dropping it into the larynx at longer or shorter intervals. In addition, inhalations of a twenty per cent. solution are used frequently by the patient. The results obtained depend upon the anæsthetic and parasitic properties of menthol; and while but four cases of cicatrization of ulcers have been recorded, and even less has been accomplished against infiltrations, nearly all who have used this remedy agree, however, that it produces marked amelioration in the pain, dysphagia and cough. We may mention among those who are more favorably impressed with the remedy, Hyndman[31], who uses it in sprays, Beehag[32] who follows Rosenberg more closely, H. Smith[33] who uses a hot spray of vaseline with menthol and iodoform, Ossendoosky[34] who applies it with a cotton application, F. Potter[35], C. S. L. Knight[36], Lennox Brown[37], and others. I have used menthol in a number of cases and am favorably impressed. The following case illustrates its beneficial action:

Mrs. W. F. D., aged 37, duration of illness one year. On examination find the following, marked emaciation, considerable cough, aphonia, no dysphagia. Pulse 112, Resp. 134, Temp. 100° F. at 11:30 A. M. Lungs: large cavity in right side, left apex consolidated. Larynx: large, characteristic infiltration over both arytenoids, extending up the ary-epiglottic folds. Bacilli abundant. Treatment for the present, supporting. One week following the first visit found the patient suffering great dysphagia. Examination revealed both arytenoids spotted with numerous pin-head, superficial ulcerations. Treatment: daily insufflations of iodoform with three to four inhalations of five drops of 15 per cent. menthol in oil. In one week dysphagia had disappeared and the larynx presented the same picture as on first examination. I invariably use iodoform with the menthol inhalations except when applying the latter directly to the larynx, which I do but seldom, and then by means of cotton.

Iodoform.—This is a remedy upon which I depend more than any other, using it alone or in combination with morphia and a bland powder. With the menthol, as well as the lactic acid treatment, iodoform serves me as an adjunct. First, having cleansed the larynx, a spray of cocaine, three to five per cent., is used for the purpose of allaying sensibility. This having been accomplished is of great value in preventing the cough, caused by and the dislodgement of the powder. I then insufflate a portion of the following:

℞ Morph. sulph. ..... gr. x.
Pulv. iodoform ..... ʒ jss.
Pulv. acaciæ ..... ʒ ij.
M.

The morphia relieves pain for a length of time after the effects of the cocaine have disappeared and the acacia adds to the adherent properties of the iodoform. Under this treatment alone, I have seen single ulcers heal very rapidly. The author uses iodoform alone in infiltration without ulceration, and believes to have seen slight absorption take place. Lactic acid, however, is far preferable in this condition. The adherents of this method of treatment have been, and are still, very numerous. We may mention, Bosworth[38], Masser[39] (placing it above lactic acid), Luc[40] (employing both lactic acid and iodoform), Schnitzler[41], Semon[42], Butlin[43] and a great host of others.

Iodol, has been advanced principally to substitute iodoform on account of the latter's disagreeable odor. Those who claim as good, if not better, results with this drug, are not very numerous. Lublinski[44] and Peinado[45] have reported success with it. Personally we have never seen so good results with iodol as with iodoform, although we gave it a fair trial. The disagreeable odor of iodoform can be greatly disguised by a few drops of oil of bitter almond or by coumarin, first recommended to me by a druggist.

Among all remedies for laryngeal tuberculosis, there has never been one which has

so rapidly gained favor as *lactic acid.*, From the time when Krause, in 1885, published his first report, medical literature has not ceased to abound in successful trials of the remedy. Dr. H. Krause[46] had his attention first called to lactic acid by an article by Mosetig-Moorhof, who used it in lupus and caries fungosa. His method was to use from a ten to eighty per cent. solution, passing as rapidly as possible to the stronger. He applied these by means of cotton or sponge, rubbing the parts as thoroughly as possible. He also, to reach more deeply situated ulcers, dropped the remedy by means of a syringe, and in cases of hard infiltrations first scarifying and then rubbing with the acid. He claimed to be able to heal ulcerations, lessen infiltrations and remove excrescences. Gottstein and Heryng[47] corroborated claims. Major[48] in 1886 endorsed Krause's statements and wrote favorably of submucous injections. Jellinek[49] in 1886 endorsed the use of lactic acid, and showed good results in shallow ulcerations and soft infiltrations. Heryng, 1887, recommended submucous injections of lactic acid[50] and incising swollen parts and rubbing them with the acid[51]. Among the first to use the lactic acid in a spray was Leets[52].

These are some of the pioneers in a form of treatment which is the best, we believe, that has up to the present time been given us. It is to Krause and Heryng that we owe our greatest acknowledgements, and it is with their names that it is closely associated. While to Krause is given the honor of first applying the remedy, to Heryng is due a more satisfactory and extensive method of its application. Indeed, this method of treatment is called the Krause-Heryng method. The latter too, has changed it from a purely medicinal to a partially surgical procedure. From the lactic acid treatment to the purely surgical is but a step and then by way of Heryng. Among the adherents of this treatment are Golinetz[53], Mikitin[54], Löschs[55], Simanorvski[56], Lauenberg[57], Symond[58], Beale[59], Greville MacDonald[60], Lennox Brown[61], Bronner[62], Butlin[63] and a long list of others. It is impossible to separate the treatment with lactic acid from that by curetting. The two go hand in hand, Heryng having proposed the latter and Krause rapidly adopting it. By means of a small curette, Heryng scrapes such ulcers as resist lactic acid rubbings, infiltrations, and new growths, after which the acid is applied. In 1890 he reported 482 cases of which 52 had lactic acid applied and 37 were curetted, these latter being very bad cases. He claims 15 cases of absolute cicatrization, lasting more than three months, and 32 of cicatrization for a less period. Krause[64] reports 71 cases with 43 cured or ameliorated by this method. Sedziah[65] reports more or less favorable effects in 73.5 per cent.

Our experience with lactic acid has been confined to rubbings with or without previous scarification, and allows us to draw these deductions, viz., superficial ulcers heal rapidly but only temporarily; soft infiltrations break down quickly leaving ulcerations whose tendency is to heal under treatment; tuberculous excrescences are most markedly affected by strong solutions of lactic acid, and disappear with the greatest rapidity, yielding truly beautiful results; hard infiltrations are unaffected by the acid alone; scarifications, unless deep and numerous, do not increase the acid's efficacy. My practice has been to supplement this treatment by insufflations of iodoform, except in cases of soft excrescences, and therefore only in these latter, can the good that resulted be attributed to lactic acid alone. Too much care cannot be exercised in applying solutions of proper strength, (that is, not too strong, until the patient tolerates the remedy), and in allowing it to remain as long and thoroughly in contact with the parts as possible.

We pass now to the *surgical treatment* proper, and I cannot help repeating that from the lactic acid to curettement pure and simple is but a step, and a confusing one, when the literature is consulted. However, Heryng alone is responsible for this treatment, and we find him advising it in cases in which, despite deep incisions and energetic rubbings with lactic acid, the ulcers refuse to heal[66]. Beschorner[67], Schæffer[68] and Treuman[69] recommend the treatment by curettement. A spoon after that of Volkman or one devised by Heryng is used.

The *galvano-cautery* has met with but little encouragement, principally on account of the liability to œdema that sometimes follows. Gouguenheim[70] however, as well as Schmiegelow[71], has reported good results. Still, a more purely surgical treatment is that recommended in primary tuberculosis by Betz[72], viz., laryngectomy; and that for the removal of tuberculous tumors. Gouguenheim[73] is most active in recommending surgical interference in these cases and gives as indications for this procedure dyspnœa and apnœa, dysphagia and aphonia. He uses either a cutting forceps similar to Mackenzie's or a "larnygeal punch" devised by himself. Dehid[74] discourages surgical inter-

vention, but states that, if removal is determined on, electro-cautery should be performed.

Tracheotomy in laryngeal tuberculosis has been earnestly advocated by Robinson[75], M. Schmidt[76], Seifert[77] and others, while probably the strongest opponent to this procedure is Lennox Brown[78]. Robinson[75] as early as 1879, believed it to be a palliative remedy of much value, although he at the same time believed phthisical laryngitis to be rarely tuberculosis. Schmidt claims that it lessens dysphagia, reduces laryngeal swelling, and improves the general health[76], and reports 15 cases[77], in five of which cicatrization took place. Those in favor of tracheotomy use it not only to relieve dyspnœa, but also, in early cases, to prevent mechanical irritation by the passage of air over the larynx, to lessen the danger of infecting the lungs in primary laryngeal cases, to rest the larynx and to more readily make topical applications.

An impetus given by Koch in his publication regarding a cure for consumption has caused an overflow of new so-called cures. Among those taking a prominent place in our minds to-day are Koch's tuberculin, Liebreich's cantharidinate of potash, and the Gibbes-Shurley treatment. Considering the length of time these remedies have been given us, many and varied are the experiences of investigators, and all have something to say of their effects in tuberculosis of the larynx. I consider it of interest, only historically, to study the reports appearing but a few months after these discoveries, and shall be content to refer only to those of the most recent dates, believing that time will prove their value and that a too hasty judgment now will distort our future conclusions. In speaking of these remedies we omit all matters referring to technique, indications and other interesting questions, and refer only to their effects, as reported.

Koch's Tuberculin.—That the larynx is a place pre-eminently suited for the study of this remedy was early recognized, and should time forbid its use in the cranial cavity, its application to the larynx may still be permissible as partaking of the nature of external tuberculosis. Tuberculin has caused ulcers to heal, it has caused ulcers to develop, it has removed excrescences and infiltrations and has produced great swellings and œdema. It has improved larynges and has destroyed them. What do some statistics show?

Mr. Lennox Brown[80] reports 13 cases of laryngeal and laryngo-pulmonary tubercu-

Name.	Most marked subjective symptoms.	Most marked objective symptoms.	No. of injections.	Total quantity.	Time from first to last injection.	Result.
1. E. L.....	Voice, husky.	Inter-aryt thickening, redness between vocal bands anteriorly.	27	*mgr.* 719	3 mos. 20 dys.	Thickening greatly diminished.
2. J. B.....	Complete aphonia, dysphagia.	Ulcer on left ventr. band. Both aryty's very thick. Vocal bands thickened and injected.	14	104¼	2 mos.	Slight voice at times. Ulcer gone. Vocal bands normal in color. Arty's greatly wrinkled.
3. W. H. H.	Voice, husky.	Thickness inter-aryt. Right vocal band notched in centre and red.	9	39½	2 mos. 20 dys.	Aryt's, greatly thickened. Increased discharge.
4. J. S. L....	Voice, husky.	Both aryt's thick. Right vocal band thick and red. Inter-aryt excrescences.	8	52	21 dys.	No apparent change.
5. J. J. D....	Voice, husky.	Larynx anæmic. Excrescence inter-aryt.	12	141	25 dys.	No apparent change.

losis observed under himself. Prof. Krause, and Prof. Gerhard, and although the cases have been followed but a short time, offer conclusions of more flattering than a careful study of their histories warrants. Of the 13 cases 7 seem improved, 1 presents negative results and 5 seem worse. Sir Morell Mackenzie[81] reports 7 cases with 1 improved, 1 negative and 5 unimproved or worse. In Flataus' cases[82] the results were good in 3 and bad in 2.

Schnitzler[82] shows one good result and another good so far as the larynx was concerned, but bad so far as the lungs were affected. Schreiber[82] reports 1 improved and 4 negative. Irsay[82] reports 2 improved and 1 worse. It would be tiresome to continue these figures, and I will hastily report a few cases observed in Denver. Through the courtesy of Drs. Elsner and Mener we have examined some 20 cases. In only 5 were the laryngeal appearances markedly tuberculous, although a greater or less catarrhal thickening was observed in nearly all. The following table gives the observations in the 5 cases mentioned.

It will be seen by the foregoing table that of 5 cases, 2 have improved, 1 grown worse and 2 remained unchanged. Number 2 grew so much worse, as far as his lungs and general condition were involved, that he has since died, and number 3 grew so much worse, both as to his laryngeal and pulmonary troubles, that treatment was stopped and the method of Shurley substituted. He is failing very rapidly. *

The remedy suggested by Liebreich and that of Shurley have been tested still less than that of Koch. However, a few reliable men have given us an idea, at least, of their values. The Liebreich cantharidinate of potash or soda is given in doses of two to four decimilligrams. P. Heyman[83] has seen ulcers in the larynx clear, and swellings lessen. B. Fraenkel[84] has seen improvemeut in the aphonia and a cure of ulcerations. Lennox Brown[85] reports two cases in which the Liebreich remedy had to be substituted for the Koch. In one it caused no change, in the other dysuria compelled its discontinuance.

The *Shurley-Gibbes* treatment consists in the use of hypodermic injections of iodine and chloride of gold and sodium, and the inhalations of chlorine gas made respirable by the presence of a spray of sodium chloride. In 27 cases reported in the *Therapeutic Gazette*, April 15, 1891, we find 13 with more or less laryngeal complication, and the results, referring only to the larynx, are as follows:—improved 5, worse 3, no result noted or negative 5. We have seen but one case treated by this method. This is No. 3 of the above table, and as stated, Koch's tuberculin had already been given to the detriment, we believe, of the patient.

The *climatic* treatment of the laryngeal consumption can be of scarcely less importance than that of the pulmonary disease, and still very little has been offered in medical literature to guide us. Even the question of climate for the latter is an unsettled one in many respects; still it has not been neglected by eminent writers. What little was said on the question of climatic influence in laryngeal phthisis was universally opposed to high altitudes, until Wagner[86] stated that he believed cases of laryngeal tuberculosis could remain at high altitudes provided the pulmonary complication had improved. Ingals[87] believes high altitudes of benefit in laryngeal phthisis, only when their injurious effects are more than counterbalanced by their beneficial influence on the general disease. Dr. S. E. Solly, of Colorado Springs, believes "this climatic influence is, as a rule, beneficial in laryngeal phthisis."[91] He reports 7 cases[92] of laryngeal phthisis, all but one of which improved, more or less, in this climate.

We have endeavored to record our cases with special reference to the effect of this high and dry atmosphere, and present the following table.

Some explanation of this table may be necessary, and while its conclusions are open to considerable criticism, it at least paves the way for more accurate and scientific results. Many of the cases were observed by us only a short time. The length of "residence in Colorado" was reckoned from the time of their arrival, only to the last date of our observation, so that many of those informed may since have grown worse, or vice versa. All the cases reported have had more or less treatment, both local and general. Our judgment of improvement or otherwise has been, of course, based in the majority of cases upon the patient's statements, except in those cases which remained under our care for some length of time.

Nor have we endeavored in the table to separate the incipient cases of either lung or laryngeal disease from those more advanced. In a general way we may sum up as follows: Of the 30 cases observed, the lungs were improved in 16, worse in 10, unchanged in 4. The larynges were improved in 12, worse in

*This case has died since reading of this paper.

	Name.	Duration of Disease of		Where contracted. Disease of		Effect of Colorado on		Length of residence in Colorado.
		Lungs.	Larynx.	Lungs.	Larynx.	Lungs.	Larynx.	
1.	J. C.....	6½ yrs.	4 mos.	Cal.	Colo.	Improved.	Imp'd by trt.	1 year.
2.	M. P.....	8 mos.	8 mos.	Wash.	Wash.	Worse.	Improved.	3 months.
3.	J. A.....	6 mos.	2 wks.	Neb.	Colo.	Worse.	Worse.	6 weeks.
4.	R. H.....	2 yrs.	2 yrs.	Kansas.	Kansas.	Inproved.	Worse until imp'd by trt.	1¾ years.
5.	J. R.....	12 yrs.	10 yrs.	Ills.	Ills.	Worse.	No change.	1 year.
6.	R. S.....	2 yrs.	2 yrs.	Cal.	Cal.	Improved.	No change.	1 year.
7.	R. S.....	1 yr.	14 dys.	Wis.	Colo.	Worse.	Growing worse.	10 months.
8.	W. F. D.	8 mos.	6 mos.	Ind.	Ind.	No change.	Growing worse.	3 weeks.
9.	T. C.....	4 yrs.	4 mos.	Ills.	Colo.	Improved.	Improved.	8 months.
10.	J. S. S.....	1 yr.	6 mos.	Texas.	Texas.	Improved.	No change.	6 weeks.
11.	G.....	7 mos.	7 mos.	Ky.	Ky.	Improved.	Worse.	1 year.
12.	A. L.....	———	1 yr.	East.	East.	Worse.	Worse.	14 months.
13.	M. W.....	2 yrs.	3 wks.	Mass.	Colo.	Worse.	Growing worse.	3 months.
14.	M. R. L.	2½ yrs.	4 wks.	N. Y.	N. Y.	Improved.	Improved.	1¾ years.
15.	W. H. R.	2 yrs.	2 wks.	Mass.	Colo.	Worse.	Growing worse.	7 months.
16.	A. M.....	8 yrs.	8 yrs.	Penna.	Penna.	Improved.	Worse.	1 year.
17.	G. B. P..	2 yrs.	6 mos.	Ohio.	Ohio.	Worse.	Worse.	5 weeks.
18.	G. B. W.	8 mos.	8 mos.	Ky.	Ky.	Improved.	Improved.	1 month.
19.	B. L.....	4 yrs.	1½ yrs.	Penna.	Penna.	Improved.	Improved.	6 months.
20.	A. L.....	5 yrs.	5 yrs.	N. Y.	N. Y.	Improved.	Improved.	6 months.
21.	R. A. J..	7 mos.	7 mos.	N. Y.	N. Y.	Worse.	Worse.	2 months.
22.	I. D. M..	3 yrs.	1½ yrs.	N. Y.	Colo.	No change.	Improved.	1⅞ years.
23.	E. L	16 mos.	16 mos.	N. Y.	N. Y.	Improved.	Improved.	11 months.
24.	J. B.....	— yrs.	1½ yrs.	Mass.	Mass.	Worse.	Improved.	11 months.
25.	R. S.....	2 yrs.	4 mos.	N. Y.	Colo.	Improved.	No change.	2 years.
26.	I. N. M..	10 yrs.	8 mos.	Canada.	Colo.	Improved.	Worse.	10 years.
27.	J. B. L...	10 yrs.	8 mos.	N. Y.	Colo.	Improved.	Growing worse.	7 years.
28.	M. K.....	4 yrs.	1 yr.	N. Y.	Colo.	Improved.	Improving.	2 years.
29.	J. S. L....	3 yrs.	3 yrs.	Ills.	Ills.	No change.	No change.	10 months.
30.	J. J. D...	15 mos.	15 mos.	Canada.	Canada.	No change.	No change.	6 weeks.

12, unchanged in 6. Of those in which the larynges grew worse, 5 were improved or unchanged as to their lungs. We believe, therefore, that while this high altitude may not be as beneficial to laryngeal as to pulmonary tuberculosis, it is certainly not deleterious to any extent. Eleven cases of the 30 originated in Colorado, but it is questionable if the climate had much causative influence, for we know the natural tendency to secondory laryngeal development upon pulmonary phthisis, particularly in advanced cases, of which we see a great many here.

General Treatment.—Concerning this, I wish merely to emphasize the necessity of maintaining the best possible nutrition, as is recommended in pulmonary phthisis. Favorable hygienic surroundings are of great importance, and, inasmuch as dysphagia is a most demoralizing symptom to the patient, his nervous and mental conditions need some attention. Often the pain is so great that the patient can swallow hardly anything despite his desire to do so. Wolfenden[89] has endeavored to partially overcome this by having the patient suck liquids through a rubber tube, while lying stomach down, and legs raised. Woodvine[90], evidently not knowing of Wolfenden's article, recommends about the same procedure, except that the liquid is made to pass to one side or the other by the patient lying on one cheek.

Palliative.—As to these, the main indication is to relieve pain. Cocaine undoubtedly stands first in this respect, and although disagreeable in taste the patient prefers it to constant suffering. Particularly before meals, say ten minutes, it is of service in allowing more comfortable deglutition. I use it preferably in the form of a lozenge, each one containing one fourth of a grain and dissolved slowly in the mouth. A three per cent. to five per cent. spray may also be used, especially if a nurse can apply it.

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Bromides and Phthisis.—M. Féré has found that saturating a person or animal with bromides predisposes to tuberculosis.

THE USE OF CHLOROFORM IN LABOR.[1]

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The victim of any disease or accident requiring a surgical operation is given an anæsthetic (without even a request being made for it) to enable him to pass through the ordeal without pain. The dreaded surgical operation is thus deprived of its greatest terror and the patient awakes with a happy feeling of relief and with a minimum amount of shock. This being admitted without debate, why are the great majority of our lying-in patients allowed to endure the travail of childbirth without the hand of science being extended to them in relief? As a rule the woman in labor is allowed to endure the most excruciating pain to the bitter end without one effort being made to alleviate her sufferings. And why? Simply because tradition handed down by one old woman to another says it is wrong and in fact wicked to interfere with the laws of nature.

To this specious kind of reasoning we have all listened and have, perhaps, too often allowed ourselves to remain inactive. How many of us insist upon using chloroform in all cases not contra-indicated? In nearly every case of confinement you will find some who are prejudiced against its use because they know nothing whatever about it. When offered its use and opposition is met with, the physician is too apt to shrug his shoulders and imagine he is relieving himself of all responsibility by simply saying, "Do just as you like". When he does this he is shirking an imperative duty, just the same as the surgeon would that neglected to administer an anæsthetic when about to do a capital operation. The patient and assistants must be properly educated to its use and ofttimes the nurse will bear a little educational work before she will act in full sympathy with the attending physician. Notwithstanding the ignorance existing concerning its use, the principal reason for its not being more generally used is due to the fact that physicians are timid in using chloroform as they usually do by clumsily employing a handkerchief as an inhaler. By this mode of administration, either the physician must attend to it himself or some one competent to do so, and even then its use is attended by no little risk, as fatal narcosis may follow a temporary suspension of vigilance. As a result, the use of chloroform is generally unsatisfactory and is not given with that confidence which inspires its constant and continual use. Several years ago, I came across one of Dr. Batterskall's inhalers and at once the idea occurred to me that it was just what I wanted to use in my confinement cases. It is so constructed that not a drop of the anæsthetic is lost. The reservoir is cylindrical in shape and so arranged with valves, openings, etc., that the anæsthetic can be easily given in large or small quantities as desired. During the first stage of labor, the inhaler is so regulated that a small amount of chloroform is used, just enough to make the patient comfortable, but not sufficient to produce full anæsthesia.

The inhaler being elongated in form and weighing over 19 ounces, makes it unnecessary for any one to attend to the anæsthetic except the patient herself. As soon as unconsciousness approaches, the inhaler drops from the face and consciousness of pain gradually returns, when it is reapplied. When the head is well down on the perineum and only a few pains are necessary to complete the delivery, some one is directed to keep the hood of the inhaler to the face until the head is delivered, when the anæsthetic is withdrawn and not given again unless some complication should be discovered requiring its use. By the proper administration of chloroform in labor the following results are sure to be attained:

1. No pain—hence no nervous shock—consequently the "inevitable chill" does not appear.

2. It reduces the number of perineal tears to minimum.

3. It shortens labor and in several ways greatly relieves the attendants.

4. Childbirth being robbed of its chief terror, the tendency to resort to criminal practices is reduced and population consequently increased.

5. Brings increased respect for the medical attendant. The gratefulness depicted upon the countenance of the woman when informed by her attendant that she is a mother (having become so without pain) can not fail to arouse in him thoughts so pleasing that he is apt to forget, for a moment, that a doctor has any trials.

[1] Read before the N. Y. State Medical Association, New York City, October 28, 1891.

The salts of strontium, particularly the lactate, are said by Drs. Dujardin-Beaumetz and Paul to diminish albuminuria about one-half.

THREE CASES OF GONORRHŒAL SEPTICÆMIA IN PUERPERAL WOMEN.

BY ALICE MACLEAN ROSS, M. D.,

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The following cases are interesting because they illustrate the various effects that may be wrought by gonorrhœa during the lying-in period. A multitude of pelvic troubles in women are now laid at the door of this disease, with good reason, and I am convinced that if in all cases of late puerperal septicæmia a cause were carefully searched for, gonorrhœa would be answerable for an astonishingly large number. In August of this year I attended three women in confinement, two of whom I knew to have had gonorrhœa because I had treated them for it. In the third case the diagnosis was made afterward. In the first case there were absolutely no bad symptoms. The second developed an ordinary septic endometritis, and the third had septic fever which went on to pyæmia.

Case 1.—Ada J., entered the Hospital a month before confinement. She had gonorrhœa which I did not entirely cure before labor came on. A vaginal douche of bichloride of mercury, 1-4000, was given in the first stage, and the same regularly after delivery. She had no rise of temperature and made a normal recovery.

Case 2.—Carrie D. entered the Hospital July 17, and was delivered of a boy on Aug. 20. She had an antiseptic vaginal douche, (corros. sub., 1-2000), before delivery and this was kept up regularly afterward. Her temperature ranged between 99° in the morning to about 100° in the evening until the sixth day when it suddenly rose to 103°. Intrauterine douches of bichloride 1-4000 were given twice daily. There was tenderness over the uterus, and this together with the temperature gradually diminished and disappeared upon the eleventh day, and recovery was good.

Case 3.—(This case I treated under the direction of Dr. H. W. Longyear, visiting physician to the Woman's Hospital). Hattie G., aged 15 years, entered the hospital May 2. She had no idea when her last monthly period occurred or how far along in gestation she was. I examined her and judged that she was somewhere between the sixth and seventh months of pregnancy, and found all the parts apparently healthy. At the time of the examination, there was no increase in the vaginal secretion, no excoriation of the external parts, and the patient denied having had the "whites" or a discharge of any kind.

Aug. 6.—She was delivered of a male child, weighing 5¼ pounds, after a normal labor. The temperature immediately following was 99°, but soon went down to normal. During the next three days it ranged between 99° in the morning to 100½° in the evening. Suspecting that this oscillation was due to malarial fever from which about one-half my patients have suffered, yet fearing septicæmia, I gave quinine gr. iij t. d. and ordered bichloride vaginal douches.

Aug. 10.—Free passages from the bowels during the night relieved the system of much offending material, and in the morning the temperature was normal, but in the evening the thermometer registered a body heat of 101-2°. No area of tenderness could be found upon deep pressure over the uterus or pelvic apparatus, and the lochia had no bad odor. There was no symptom save the increase of temperature that would indicate anything wrong.

Aug. 11.—The trouble which had been brewing burst forth, with no warning chill the temperature rose in the afternoon to 104.2°, and this pyrexia was accompanied by diarrhœa. Intrauterine douches of bichloride were given twice a day, much pale shreddy material was washed from the uterine cavity, and the fever gradually diminished under this treatment. The babe's eyes were attacked by a violent ophthalmia the same day as the onset of fever in the mother.

Aug. 15.—Temperature this A. M. was 98.4°, P. M. 99.4°. The aspect of the case seemed bright and a termination of the sickness close at hand, but our hopes were not to be realized. The column of mercury commenced to climb, and during the next five days ranged between 99° and 102° morning and evening.

Aug. 21.—Great soreness and stiffness of the joints of the shoulders appeared. There was no redness or swelling over the affected portion, but the patient experienced great pain on motion, and complained very bitterly at night. Profuse sweating of the body accompanied this condition. The elbow joints were next involved. The systematical disposition of the joints affected is worthy of note. These rheumatic symptoms were combated with salol, alkalies, phenacetine, salicyllate of soda, and phytolacca, to little or no purpose.

Aug. 30.—A chill announced the pres-

ence of pus. This was located back of the shoulders in the scapular muscles of the right side; a large abscess formed here.

Sept. 8.—This collection of pus on right shoulder was evacuated and ℥ viij discharged.

Sept. 13.—Abscess in exactly similar spot on the left shoulder was opened, pus from this was examined by Dr. Hickey, of Harper Hospital, but was pronounced free from gonnococci.

Oct. 14.—Soreness was complained of in left side of pelvic cavity with pain after emptying the bladder. No fluctuation could be detected and all disappeared under hot applications.

Metastatic abscesses formed successively upon the right hip, left arm, left breast, over the crest of the ilium, and upon the right thigh—seven in all—and after the opening and discharging of the last, there has been a return of appetite, increase in strength, and the patient is convalescent. The fact of the child's having a violent ophthalmia and this coming on the same day as the onset of fever in the mother, together with the appearance of rheumatism, make the diagnosis of gonorrhœa certain. I believe this to be a case of the latent form, and its history is probably this: the germs of this disease lodged upon a thickened mucous membrane which resisted their attack, or they were inert, and made but little inroad. Little inflammation causing little increase in the secretion occurred and the trouble was passed by unnoticed. After the birth of the child, the placental site formed a point very favorable for attack. The numerous blood vessels leading from this surface afforded a ready channel for the entrance of the infecting material into the blood. This accounts for the almost utter absence of pelvic symptoms, and for the virulence of the systemic poisoning. The infection took place through the blood vessels instead of through the tubes and pelvic cavity. The result was a violent septicæmia, accompanied by gonorrhœal rheumatism, the former going on to pyæmia and seven metastatic abscesses forming in various parts of the body. These cases illustrate the varied results of gonorrhœa in the puerperal woman, and the great danger to which she is exposed by it. I feel sure that this disease is at the bottom of many cases of septicæmia that puzzle the antiseptic accoucheur. Suspicion may be directed towards it by a late onset, the sixth day being usual.

The range of temperature preceding the onset is worthy of notice. I have seen curious rises of temperature from apparently no cause whatever, and I have had twenty-four cases of real old-fashioned ague after childbirth, but I believe that this peculiar oscillation, from little above normal in the morning to 100° or 101° in the evening, immediately following labor, to be indicative, almost invariably, of septic absorption. It may continue for six or seven days, and gradually disappear, or it may be the precursor of graver trouble. Look out for it. I feel convinced that an antiseptic intra-uterine douche is the proper thing early. No harm can possibly be done if it is properly conducted, and serious trouble may be prevented.

SWEET OIL IN THE TREATMENT OF GALL-STONES.[1]

BY THOMAS J. MAYS, M. D.,

PHILADELPHIA.

A COLLECTIVE INVESTIGATION BY THE THERAPEUTIC SECTION OF THE PHILADELPHIA POLYCLINIC MEDICAL SOCIETY.

The subject of the action of sweet oil in the treatment of biliary colic and catarrh of the hepatic passages has recently been warmly discussed. There are many who regard this agent as being very much overrated, while many others believe that it has a very beneficial influence on this disease. In view of the divided opinions on, and the importance of, this matter, the Therapeutic Section of the Philadelphia Polyclinic Medical Society has, as a part of its scientific work, undertaken a special collective investigation concerning the clinical value of this drug in gall-stone colic. With this end in view, the undersigned committee was appointed, and directed to send a number of circulars to the members of the profession, of which the following is a copy:

"Sex and age of patient? Seat of pain? Jaundice? Previous attacks? Did you test any other remedy, and with what results? Result of treatment with olive oil? Remarks."

To these circulars, nineteen replies were received, and thirty-seven cases of gall-stone colic treated with olive oil were reported. To these members of the profession the warmest

[1] Read before the Polyclinic Medical Society, September 9, 1891.

thanks of this committee are due for the promptitude with which they responded. Additionally the committee imposed the task upon itself to collect as far as possible all the previously reported cases of biliary colic which were treated according to this method, and succeeded in gathering records of seventeen cases, making altogether a list of fifty-four cases.

An analysis of these fifty-four cases shows that there were about one-third more females than males who suffered from gall-stone colic; that two died, that in three, negative results were obtained, and that in fifty, or in 98 per cent., positive relief was afforded. These results make a better showing still, when we consider that one of those who died was suffering from adhesive obstruction of the bile-ducts—a disease which no procedure, either medical or surgical, could have remedied. Nor do these figures give us a true estimate of the favorable action of olive oil in this disease; for two of the observers state that they have treated forty other cases of biliary colic without a failure, but of which they had kept no record—making in all a collective return of eighty-nine cases—showing the great value of this drug.

These cases illustrate, then, the positive efficaciousness of sweet oil in the treatment of gall-stone colic, and the question naturally arises, therefore, as to the manner in which this agent acts. Dr. Rosenberg's experiments ("Ueber die Anwendung des Olivenöls bei der Behandlung der Gallensteinkrankheit," *Therapeutische Monatshefte*, December, 1889, S. 542) demonstrate beyond a doubt that it largely increases the quantity of bile secreted, while at the same time it diminishes its consistency. But how does it accomplish this? Does it stimulate the biliary channels by coming in contact with their openings into the alimentary canal? Or is it decomposed into fatty acids and glycerine through the instrumentality of the pancreatic juice, and does the "glycerin so liberated exert in the duodenum an action similar to that which takes place when it is introduced into the rectum," causing a powerful reflex peristalsis—an ingenious theory suggested by Dr. D. D. Stewart?[2] Or does it act in accordance with the hypothesis formulated by Virchow, who shows from his own experiments (*Therapeutische Monatshefte*, 1890, S. 86) that it is absorbed from the alimentary canal, is excreted by the liver, and is thrown into the bowels again through the biliary passages? The last of these theories appears to be most rational, because it explains certain well-known features in its action, and also places it on a level with the action of other cholagogues. We may conceive then that the beneficial influence of oil consists not so much in dissolving the biliary concrements, as it does in increasing the biliary excretion, in flushing, and in lubricating and washing out the passages of the liver. (A table of the cases was here reported.)

Another point of interest is the proper dose of the oil. Are large doses necessary? It appears not, for eight of the cases received only dessert-spoonful doses every three or four hours, and apparently with the same prompt and positive relief as that which was afforded by doses of from five ounces to one and two pints. If this should be confirmed by further experience it would be a great practical gain in view of the fact that a great many persons show a strong aversion to all kinds of oil, especially if they are to be taken in large quantities.

Furthermore, according to the observation of Dr. Stewart, it does not appear to make any difference whether olive oil or cotton-seed oil is used. Indeed it is well known that much of the oil which is sold as olive is in reality refined cotton-seed oil; and Dr. Stewart's observation tends to show that in all probability any bland oil will have the same effect on the disease under consideration.

In conclusion, the committee desires to congratulate the Polyclinic Medical Society on the selection of a subject for collective investigation which has proven so fruitful of practical results as that which is embodied in this report; and expresses the hope that it may continue its good work of testing therapeutic agents in a clinical way. It is true that animal experimentation often points out the path in which the usefulness of a drug lies, but clinical and collective research is after all the crucial and final test of all true therapeutic progress.

THOMAS J. MAYS, M. D.,
HOMER C. BLOOM, M. D.,
Committee.

The value of cocaine in yellow fever, originally affirmed by Thorington, is confirmed by Dr. Joseph Levi, who finds it to check, or to prevent, at times instantaneously, the constant and debilitating vomiting. He administers the remedy in doses of from ½ to 1 grain every hour, or as required.

[2] "A Suggestion as to the Action of Olive or Cotton-seed Oil in Gall-stone Colic." By Dr. D. D. Stewart. *Medical News*, November 23, 1889.

Society Reports.

POLYCLINIC MEDICAL SOCIETY.

SEPT. 9TH, 1891.

A paper on "Sweet Oil in the Treatment of Gall-Stones," was read by Dr. Thos. J. Mays. (See page 853.)

Dr. William S. Stewart:—I wish to show the Society a stone which was obtained this summer from a lady between seventy and eighty years of age. She had suffered with periodical attacks affecting the bowels and passing off with simple treatment. On the last occasion she suffered excruciating pain in the region of the cæcum and I was sent for. Thinking there might be some inflammatory affection in this region and that possibly abdominal section would be necessary, and finding a mass in the right iliac region, I placed her in the knee-chest position and gave her a very large injection. After as much as possible had been injected, I had her sit on a jar. Not experiencing relief, I continued the injections while she was in this position, using flaxseed tea. This was continued for five or ten minutes. She was then put to bed and another injection given. I then left her, and shortly afterward she got up and this huge gall-stone was passed. (About the size of a hen's egg.)

Some twenty-five years ago my attention was directed to the method of treatment by olive oil by a lady from California. I had seen her some time before in a debilitated condition from frequent attacks of biliary colic. I inquired the cause of the improvement, and she told me that she went with a friend to see a quack, who at once told her that she had gall-stones, and directed her to take half a pint of sweet oil in the evening and rub the right side frequently during the night, telling her that when her bowels were opened she would pass many gall-stones. It happened just as he said, and she had entire relief. Since then I have taken advantage of this hint.

I use the spirits of chloroform in combination with olive oil during the period of attack, and recommend that the oil be continued in doses of two tablespoonfuls before each meal, for a period of several weeks afterward. In this connection I recall to mind an amusing occurrence that happened in the army. A soldier was suddenly taken with biliary colic, and the assistant surgeon, an ignorant man, who had been promoted from the position of hospital steward, was called. He at once prepared a dose of chloroform, and taking it to the patient said: "Take this. It may do you good or it may kill you. Try it."

Dr. John C. Da Costa:—My results with olive oil have not been so brilliant nor so quick as those reported in the paper. Opiates and chloroform will relieve the pain, but phosphate of soda does not seem to act as well as reported. Calomel between the attacks acts well; corrosive sublimate still better. One case will illustrate what I have to say. A hysterical woman has had at least five or six attacks in two years. I was disposed to think that all the attacks were not due to gall-stones until she brought me the stones which she had just passed. She was treated with olive oil in half-pint doses. Since then she has had four or five attacks. In the last two she did not consult me until they were over. She takes half a pint to a pint of olive oil at one dose and lies down. In twelve or fourteen hours (not two or three as in some of the reported cases) she is relieved. The oil seems rather to lengthen the interval between the attacks.

Dr. M. Price:—The committee deserve great credit for its thorough investigation, but I cannot see the brilliant results referred to. In my experience I have not found the spasm of biliary colic to last many hours. How olive oil can relieve the pain, unless it is by a lubricating process, I cannot understand. Many stones are of a soft non-irritating nature, and if the spasm in the gall-duct is relieved there is no trouble; the stone passes readily except when the duct is inflamed. Within a month I have seen two post-mortems. In one, a man, there were found two hundred and fifty gall-stones in the bladder. The man had never had an attack. In the other, that of an old lady with cancer of the kidney and a stone in the kidney, the gall-bladder contained five or six ounces of grumous fluid and a number of soft gelatinous stones. She had never had any symptoms referable to the gall-bladder. There is another form of stone in which the treatment could be of no benefit, and that is in those hard ones which we see in cancer, and which in many cases, I think, are the cause of cancer of the liver. Where the stone is large and produces constant irritation there can be no possible benefit from any treatment except tremendous doses of morphia. The stones which I show you are hard and were removed by section.

The history of the cases reported, is of this character. You prescribe a remedy to which the patient submits and endures the pain until

the spasmodic period of the disease passes. Chloroform and morphia during the continuance of the spasm seems to be the only rational treatment.

In this whole series of cases has there been a post-mortem? It is very difficult to say when you have a patient suffering with spasmodic pain in the gall-bladder that it is due to gall-stones. Four or five years ago I saw a travelling minstrel who had had attack after attack, and been treated by the best surgeons in the country for gall-stones. He had received olive oil and many other methods of treatment. I said to him there was no use of doing anything until we found out what was in the gall-bladder. I operated, and after breaking up adhesions reached the gall-bladder and found it perfectly healthy. The patient was completely relieved. His symptoms had simulated gall-stones so much that many surgeons wanted to open him for gall-stones.

In regard to cases of obstruction of the gall-duct.[1] There are cases simulating gall-stones which are not relieved by medical treatment, but which could be relieved without trouble by abdominal section. It has been suggested by one of the best surgeons in this country to open the abdominal cavity and drain the gall-bladder, then to take a rubber ligature and unite the duodenum or ileum to the gall-bladder, and then with a whipped suture unite the peritoneum of the bowel to the peritoneum of the gall-bladder. In the course of three or four days a fistula forms and then the abdominal opening can be closed with silkworm sutures previously introduced. There is no question that gall-stones of the size that I have shown should be removed. It is my firm belief that gall-stones of this hard, irritating nature may in time produce malignant disease of the gall-bladder or of the gall-duct.

I think with Dr. Mays, that the explanation of the benefit of olive oil, if it exerts any, is to be found in the lubricating and stimulating qualities of the oil, and that it relieves spasm simply by its purgative effect. I cannot see where the benefit can come in. It has no solvent effect, and it cannot remove a stone whose diameter is ten times that of the gall-duct.

Dr. James B. Walker:—In my experience, the question is not so much what will relieve the attack, as what will prevent its recurrence. If one would send out a series of questions in regard to the usefulness of any particular agent in gall-stones, would he not receive replies very similar to those given to-night? Take calomel, or any other agent which acts as a laxative, and it will terminate an attack of gall-stones, if it is a terminable attack. The question is: What will prevent recurrence? So far as this report goes, it seems to give to olive oil a favorable position as an agent for preventing recurrence. This is the most favorable report that I have seen. Still these are not exceptional results. We meet with cases of gall-stones where the attack is never repeated. Unquestionably, in many cases the recurrences are due to the number of gall-stones. Sometimes, however, the attack terminates without the discharge of the stone, and yet there is no recurrence for months. I have a patient who recently passed a calculus, resembling a mulberry both in shape and appearance; he passed this after a number of attacks under my observation. The attacks were treated with morphia and calomel, followed by phosphate of sodium and nitro-muriatic acid. After each attack there would be a return to health for a period. In at least ten attacks, the fæces were examined without result. At times a detritus was found, looking like a crumbled stone. This was found in the last attack, and it was thought that the stone had crumbled and passed; however, the following day another severe attack occurred, in which blood was passed, and in the centre of a clot of blood was found the calculus as large as the last joint of the index finger, and without facets. This was, unquestionably the cause of all the trouble.

I believe that any laxative agent which will promote peristalsis and free biliary discharge will relieve the immediate attack if the stone can escape; then some agent to relieve the catarrh of the duodenum and the hepatic catarrh will be required. I have used olive oil in several cases, but my experience has not been satisfactory. The case just referred to received six ounces of olive oil on two occasions without benefit; other patients have received equal doses without success. The best remedy that I have found for old, recurring cases, where there seems to be an impacted stone, and where even cancer has been suspected, from the cachexia, is spirits of chloroform. In two cases, sisters, seen at intervals of five years, this seemed to be the agent that turned the tide of events after repeated efforts with other remedies. I gave it in teaspoonful doses three times a day. The cases immediately changed their

[1] In the doctors' report of the case of stricture of the gall-duct with death, the post-mortem found no stone; in this case it was stricture, and not stone, under treatment.

character, the jaundice disappeared, and improvement in the general health took place. I believe the chloroform, which is known to increase the liquefaction of the bile, is of value in these cases; this, with phosphate of sodium, or some other sodium salt, or, where the patient is wealthy enough, a visit to the Carlsbad Springs. Here the waters are taken with a strict dietary for three weeks; when the patient is emaciated to a certain degree, he is sent to some other place for recuperation, to return for three successive years. This will often effect a cure. I have a patient who has been benefited by this course. After her return from the first visit to Carlsbad she had three attacks during the year; after the second she had two, and her general health was excellent. She is now returning from her third visit.

Dr. Streets, of the Navy, has mentioned to me an interesting case where he used olive oil. The patient, a sailor, was seized with an attack of gall-stones, and was at once put upon the use of olive oil. The discharges were saved, and there were obtained a number of soft, pulpy bodies, which had a very odd appearance. They were somewhat globular, and not faceted. These were placed on a surface so that the oil could be absorbed, and they shrunk in size, showing them to be faceted gall-stones. It seemed as though the oil had penetrated these in some way, either before or after leaving the biliary duct. They were unquestionably gall-stones.

Dr. A. B. Hirsh:—There is possibly one class of cases in which exception might be taken to Dr. Price's remarks in regard to having a remedy that would obviate future attacks, that is, those cases of distortion of the anatomy of the parts where no operation would avail. In the majority of cases of cholecystotomy we allow for drainage for some time, in the hope that the habit of inspissation of bile may be overcome. Those cases in which peritonitis is associated with resulting obstructive bands, and where, after closure of the fistula the symptoms recur, are not satisfactory ones to deal with. I have met with several such cases, and in these any remedy that offers a promise even of relief should be welcomed.

In regard to the cases reported by practitioners who see but few, and then only at long intervals, there often remains some doubt as to the correctness of their diagnoses. Dr. Porter published in the St. Louis *Weekly Medical Review*, in the spring of 1889, a paper in which he analyzed a large number of such cases reported of supposed relief of gall-stones by the use of olive oil; he appeared to show that the treatment had no scientific basis; that the cases had not been followed sufficiently long, and that, if anything, the observers had been careless in taking notes.

Dr. Mays:—I am here, perhaps, as the innocent champion of olive oil in the treatment of this disease. Having had some very favorable results from its action in three cases of gall-stones, I proposed the subject to the Polyclinic Medical Society for further investigation. From my own experience with it, I think that we ought to be very careful and not make any dogmatic statements concerning the action of this oil. Even if we do not know how an agents acts, we are warranted in ascribing some usefulness to it if it does the work which was intended it should perform, and especially if we were unable to accomplish this with anything else. I believe the cholagogue action of olive oil has been denied this evening, and in answer to this I would say that Rosenberg's experiments, which show its powerful influence on the biliary secretion, have been before the profession for at least a year and a half. Rutherford found that sodium salicylate was one of the best cholagogues, but the former demonstrated that the olive oil excelled the latter agent as a biliary stimulant. In view of this influence it is easy to see how it acts in this disease, and it is also easy to see how the sodium salicylate acts beneficially in similar cases.

Dr. Price seems inclined to doubt that the concretions which are evacuated after the oil is administered are true gall-stones. This is, of course, difficult to determine in many of the cases which are reported, but at least in one instance (Dr. D. D. Stewart's case) the concretions were examined by Dr. Leffmann, and by him pronounced true gall-stones.

I can hardly agree with the opinion of Dr. Walker that the sending out of inquiries concerning the action of any agent in biliary colic would have brought similar favorable replies. There is too much unanimity, I may say, in the reports favorable to the action of the oil to give the least countenance to such a belief. Besides, we endeavored to guard against this very uncertainty. The circular asked expressly whether any other agents had been given, and with what results. In the great majority of cases all the known remedies had been tried, with doubtful results, or with failures. Many observers stated that no agents had given such signal relief as sweet oil.

If we believe in the efficacy of cholagogues

to relieve the attacks of biliary colic, and are in search of an agent having a similar action to prevent their recurrence, then I think it is useless to advocate the action of chloroform in this disease, as has been done to-night. So far as I know, chloroform is not a cholagogue, but may act by relieving the spasm of the gall-ducts, and by having a solvent action on the calculi. I can more readily see how olive oil would prevent such recurrence, since it is one of the best stimulants to the hepatic secretion that we possess.

SELECTED FORMULÆ.

INDIGO AS AN EMMENAGOGUE.

Indigo as an emmenagogue was proposed by S. L. Gount since 1887. In 14 cases of amenorrhœa, J. L. Jones has recently obtained good results. He recommends the following prescription:

℞ Indigo.....grammes lx.
Subnitrate of bismuth.....grammes xv.
M. Sig. Half a tablespoonful in a half glassful of sweetened water, three times a day.

—*Journal de Médecine de Paris*, Sept. 20, 1891.

OINTMENT FOR INTERTRIGO.

The following ointment is recommended for this erythematous condition of the skin:

℞ Boric acid.....grammes 0.50.
Lanolin..... " 50.
Vaselin..... " 10.

—*Journal de Médecine de Paris*, Sept. 20, 1891.

BROMOL AS A LOCAL ANTISEPTIC.

According to C. Rademaker, the following prescription can be used with success in treatment of ulcers, locally applied:

℞ Bromol.....grammes v.
Olive oil..... " cl.
M.

℞ Bromol.....grammes iv.
Vaselin..... " xxx.
M.

—*Journal de Médecine de Paris*, October 11, 1891.

BROMOL IN DIPHTHERIA.

Rademaker recommends the following in the local treatment of this disease:

℞ Bromol.....part j.
Glycerine..... .....parts xxv.
M.

—*Journal de Médecine de Paris*, October 11, 1891.

REMOVAL OF SUPERFLUOUS HAIR.

Dr. E. O. Leberman offers the following formulæ, which, in his hands, have proved quite successful. (This formula is recommended by McCall Anderson):

℞ Barii sulphidi.....℥iss.
Zinci oxidi.....℥vj.

Mix with sufficient water to form a paste, apply for three minutes, and then wash off.

For the removal of stiff, coarse hair, the formula of Neumann is serviceable:

℞ Calc. hydrat.....℥iss.
Orpiment.....℥iij.
Amyli.....℥j.
Aq. calcis.....q. s.
Ft. pasta.

The paste should be spread over the parts from which the hair is to be removed as thick as the blade of a knife. The softened hairs should be scraped from the skin with a dull knife or ivory spatula, the parts washed with warm water and afterward thoroughly dried. A bland ointment should then be applied to the reddened surface. The length of time these pastes should remain upon the skin is best determined by the severity of their action. They both cause slight itching, which sensation is followed by an intense burning; when the latter begins, the paste had best be removed. The effect of chemical depilatories can scarcely be more than temporary, as their action can extend no deeper than the epidermis; the hair-bulbs remaining, a new growth will soon appear. Great care should be exercised in their application, and their effects should be carefully watched, for sometimes deep and painful ulcerations occur by their incautious use. However, they serve a purpose, and if properly applied will often leave the skin free from hirsute appendages which disfigure it.—*Amer. Jour. Med. Sci.*

EXPECTORANT.

℞ Liq. ammon. acetatis.....℥iv.
Spir. aether. nitr.
Syr. ipecac.
" tolu.
" scillæ, aa.....℥j.
Vini antimonii et pot. tart.....℥j.
M. Sig. Teaspoonful every two hours.

—*Weekly Med. Rev.*

FOR DELIRIUM TREMENS.

℞ Paraldehyde.....gr. v.
Bromide of ammonium.....gr. x.
Hydrate of chloral.....gr. x.
Tinct. hyoscyamus.....gtt. x.
M. Sig. Take at one dose.

—*Times and Register.*

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The Editor will be pleased to get medical news, but it is important that brevity and actual interest shall characterize communications intended for publication.

LEADING ARTICLE.

THE SURGEON IN RELATION TO APPENDICITIS.

Post-mortem examinations and anti-mortem abdominal sections have shown conclusively that inflammation in or about the head of the cæcum—heretofore known as perityphlitis, paratyphlitis, etc.—is due almost without exception to inflammation, ulceration, or perforation of the appendix vermiformis. Hence, the labors of the practitioner are simplified, and when presented with a case having the symptoms and signs of inflammation in the right flank, he no longer flounders in a sea of doubt concerning the nature of the case, but, having excluded fæcal impaction, properly names it appendicitis. Practical medicine is much indebted to pathology for this simplification of what has been heretofore a very confused subject. The most important question in relation to appendicitis which now awaits solution, is the relation which the surgeon should bear to the physician in the management of the disease. At the present time the physician treats the case until in his judgment death is inevitable without operation, and then recommends that the surgeon be called to operate. This position, practically, was maintained by the physicians taking part in the recent discussion before the Philadelphia County Medical Society—notably by Dr. Pepper. This position is justified on the ground that generally the disease terminates favorably by the use of medical means alone.

On the other hand, it practically reduces the surgeon to the position of the barber-surgeon of old, who acted only under the direction of the physician—good results being due to the wise counsel of the physician, and bad results to the poor technique of the surgeon. This, however, is a minor matter compared with others involved.

Surgeons, almost without exception, insist that the surgeon should be called in consultation as soon as the diagnosis is made, not necessarily to operate, but to become famil-

iar with the case, so that if the necessity for operation arises, he will be ready instantly to operate, and thus to give the individual patient the utmost chance for recovery. The question as to necessity for, and the time of operation is as much, if not more, a surgical than a medical question, and surgeons contend that it is not fair to the patient nor to themselves to have these questions settled, perhaps incorrectly, by the physician before the surgeon is summoned. Their contention is based upon the fact that only too often the physician lets the golden moment pass by when operation might save, and summons the surgeon only when operation can be done as a "last resort" which generally means that the patient is thereby hastened out of the world. Here the surgeon takes the responsibility, and surgery the bad name of the physician's blunder. Again, the surgeon claims, and with justice, that unless he is called at once, that the entire class of cases, of perforation of the appendix with general peritonitis is doomed; and that the class of acute cases, in which the tendency to localization of the peritonitis is slight, and the course of the disease short, without early operation, is greatly endangered. This is because it is natural for the surgeon when first called to a case to wish to postpone radical measures until he is familiar with it. He must be satisfied that operation is advisable as well as the physician; especially, as the responsibility rests with him. Moreover, when the surgeon sees the patient with the physician from the first, operation can be done as a formal procedure, with everything in readiness as it should be, and not as an emergency operation as is necessarily the case when the surgeon is called at the last minute. This position was ably sustained by Dr. Keen, in the discussion already mentioned, and will be supported by every surgeon who has seen the evil results of the usual practice. We trust that the points involved will be considered seriously by the readers of the Reporter, and we feel convinced that the early counsel of the surgeon will save many cases, otherwise fatal.

Correspondence.

Obstetrical Anæsthesia.

To the Editor of the Medical and Surgical Reporter:—Having just read an article in the Reporter under date of November 7th, written by Dr. J. B. Carrell, of Hatboro, Pa., upon the subject of "Obstetric Anæsthesia" I cannot refrain from hastily complimenting him in his views upon the subject. In fact, it has been my practice for the last 30 years, to use anæsthesia, in just such cases as he describes, with good results. It relaxes the os-uteri, and stimulates the nerves, and gives the woman *confidence* in protracted natural labor cases that something more is being done to relieve her from her condition, than merely the old mandate to tell her to "bear down and take advantage of her pains."

I, too, consider the practice *par excellence*, in just those cases described by him, and am not a little surprised that more physicians do not more generally catch on with the same opinion, and employ the same practice.

C. A. Voorhees, M. D.
827 N. Sixth Street, Philadelphia.

Bichloride of Gold and Drunkenness.

To the Editor of the Medical and Surgical Reporter:—Referring to the so-called "Bichloride of Gold Cure" for drunkenness, permit me to say that as the remedy is looked upon as a secret preparation we have the right to guess at its composition. I would suggest from the slight knowledge we possess regarding the therapeutical effect of the remedy, that something besides gold enters into its composition. It cannot contain bichloride of gold, for no such compound of gold is known. It is fair to presume that the remedy consists in part of a four per cent. solution of hydrochlorate of cocaine, with one quarter grain of hydrochlorate of morphia, and one eighth of a grain of ter-chloride of gold and sodium, in every ten drops of the cocaine solution. The secret of cure may be imagined to rest npon the *letting-down* process of substituting the anæsthetic properties of cocaine, and the sedative effects of morphia for strong drink. Ter-chloride of gold was used twenty years ago by Dr. Hoffman, of New York city, as a cure for alcoholism, and failed.

The chlorides of gold do not possess, so far as is known, any curative properties, much less being an antidote for alcoholism.

Any medicine coupled with total abstinence might with just as much reason be looked upon as a cure for drunkenness. Alcoholism is not a disease. The same criticism may be applied as well to the excessive use of opium, cocaine, or cod liver oil. No one asks that the use of these articles be prescribed, neither do they demand medical treatment. Like most medicaments, alcohol is powerful for evil, as well as for good, and its administration should be under the control and guidance of competent persons.

The indiscriminate use of alcohol should no more be permitted than should that of opium or strychnine. From an economic point of view, the remedy for alcoholic abuse is as difficult as for the excessive use of tobacco or for the suppression of the social evil. The sad death of Col. Mines, the champion of the chloride of gold cure ought to shake the faith of all drunkards who have fixed their hopes upon the remedy, and teach them that the cure for their habit does not rest upon medical art, but upon their determination to abandon the use of alcohol.

W. H. Gregg, M. D.
143 West 21st Street, New York.

Book Reviews.

EPIDEMIC INFLUENZA: NOTES ON ITS ORIGIN AND SPREAD. By Richard Sisley, M. D., Member of the Royal College of Physicians, of London. London and New York: Longmans, Green, & Co., 1891, 8 vo., 150 pp.

There are many physicians who believe that epidemic influenza is not contagious; others who believe that it is contagious, but that contagion exercises only a small influence in its spread; and still others who believe that it is not only contagious, but that it is chiefly in this way that the disease becomes epidemic. Certainly no views can be more pernicious to the welfare of the community than those which would lead to the belief that the spread of a disease is not due to contagion when such is the case. It is to counteract such evil influences that prompted the author to prepare this work.

We have read the book with great interest and satisfaction, not only on account of its dealing with the important question of the contagiousness of epidemic influenza, but because the appearance of the work at the present time, when we are again threatened with this disease, is extremely apropos.

Dr. Sisley gives careful consideration to the nomenclature, definition, origin and spread of influenza; to the noted epidemics of the past; to the incubation period; to the relation of influenza to that in animals, etc. He certainly furnishes a great deal of data which makes it evident that it spreads from the sick to the sound by contagion, that isolated cases precede an epidemic, that epidemics spread along the lines of human intercourse, etc.—in fact, he finds that in every case where the course of the disease has been studied with care it is apparent that it spread in the same way as any other contagious disease.

Dr. Sisley has undoubtedly expended a vast amount of labor in the collection and study of statistics. He has given us a book that is well-written and bears evidence of much thought. If his conclusions are regarded, much sickness, suffering and death, will be spared in future epidemics.

PERISCOPE.

THERAPEUTICS.

TREATMENT OF SCIATICA AND OTHER NEURALGIAS.

Mordhorst (*Therapeutische Monatshefte*) claims that the diagnosis of sciatica is not always easy. Inflammatory thickening of the rectus femoris and other muscles, and rheumatic affections of the trochanter major and others around the hip, and especially in the tendon of the tensor vagina femoris, often small masses varying in size from a lentil to a bean—urates, probably.

In cases of neuritis the treatment essentially consists of a hot bath fifteen minutes to one hour in duration and followed by rest in bed for another hour, and to be followed by electric massage, per author's method. This consists of the cathodol application, surface area 100 cm., to the sciatica notch, while a revolving cylinder connected with the anode is passed down the limb along the nerve, with decided pressure, and returning with slight contact, to prevent break in the current. Strength of current, five to ten milliampéres. Thirty-six cases were treated; thirty recovered, six improved. Average length of treatment, three to six weeks.

MUSTARD PLASTER AS A REMEDY FOR COUGH.

Dr. Pavel M. Gorodtzoff, of Daghestan, Caucasian Russia, draws attention (*Vratch*,

No. 32, 1891, p. 733) to the prolonged application of sinapisms as an excellent means of relieving troublesome cough. He tried the method in 11 cases of epidemic influenza (with severe respiratory complications), 10 of croupous pneumonia, 16 of dry and 4 of exudative pleurisy, 3 of pulmonary tuberculosis, and 23 of acute bronchitis. Every day throughout the illness a freshly prepared mustard plaster, measuring about 9x6 inches, was applied to the chest, and left on during the whole night, or even for twenty-four hours. In the case of adults the mustard was usually mixed with an equal part of wheat or any other meal, while in persons with tender skins, or in children, a one to 3 mixture was employed. In order to prevent any excessive irritation of the skin, the plaster was applied one day to the front of the chest and on the next to the back, on the third again to the front, and so on. In none of the cases were any serious burns inflicted, the patients bearing the application perfectly well. The sinapisms of course constituted of only a part of the treatment, other measures being employed as required. The writer draws the following conclusions: 1. In certain affections, especially in influenza, pneumonia, and acute bronchitis, a mustard plaster is a safe and effective substitute for morphine and other narcotics usually administered for relieving cough. 2. In other cases, especially in exudative pleurisy and phthisis, it is a valuable adjuvant to narcotics, allowing the administration of them in much smaller doses. 3. While relieving cough the plaster also improves the pulse and respiration; the former becoming fuller and slower (by 5 or 6 beats per minute), the latter deeper and similarly less frequent. 4. The effects seem to depend upon the mustard volatile oil, which may penetrate into the system through the skin and lungs. 5. Sinapisms applied in the way indicated appear to promote the absorption of inflammatory effusions both in pleurisy and pneumonia.—*Brit. Med. Jour.*

THE THERAPEUTIC USE OF EXTRACTS OF ANIMAL TISSUES.

The persistence and ingenuity shown by Dr. Brown-Séquard in his study of physiological effects of the juices obtained from the testicles and other glands of the bodies compels attention and interest. It seems to have been quite well proved that the injections of testicular juice have no such "dynamogenic" power as was at first alleged. That this and other secretions, however, have no physiological influence is certainly improbable, and, according to Brown-Séquard and his co-workers, is positively untrue. In an article on "The Action of Liquid Extracts Obtained from Different Organs," by Drs. Brown-Séquard and D'Arsonal (*Archives de Physiologie,* 1891, No. 3), evidence of this belief is presented, and the technique of preparing and using the extracts is described. These authors assert that each gland of the body has two functions, one, that of secreting a substance from the blood, the other, that of supplying to the blood some needed constituent. It is this latter substance which it is proposed to obtain and use therapeutically. It is stated that the secretions themselves contain some of the dynamogenic or other substance required by the organism. In illustration, the extraordinary fact is cited (p. 492) of a young physician who injected hypodermically some of his own sperm into his invalid wife's tissues. Her strength improved, and after four injections she was well. This is truly an extraordinary method of fulfilling the conjugal relations, but they do rude things in France.

The authors quoted give a number of illustrations to show that injections of the fluid of certain glands relieves symptoms caused by extirpating those glands. Thus, in the case of a dog suffering from the effects of the total removal of the thyroid, the symptoms were relieved by the injection of juice of the thyroid. A total extirpation of the pancreas causes, it is said, diabetes, but if a small part of the gland is left this accident does not occur; and this is thought to be due to the so-called external or extrinsic action of the gland upon the blood.

A wide therapeutic field opens before the scientific imagination if the views suggested above are true. Thus in myxœdema, injections of the thyroid juice should be used; in Addison's disease, the juice of the suprarenal capsules; in diabetes, the pancreatic juice; in leucocythæmia, the juice of the thyroid glands, spleen, and medulla of bones; in muscular weakness, the muscle juice.

The injection of these juices, however, unfiltered and unsterilized, is not free from danger, the testicular and ovarian juices alone excepted. Other juices are liable to cause death from septicæmia.

In order to render injections aseptic and harmless, our authors submit the fluid to a pressure of CO_2 of 40 atmospheres, and then pass it through a specially constructed filter. Bacteriological tests by MM. Straus and

Gamaleia show that the fluid now contains no micro-organisms, and experimental tests show that its use causes no accidents.

The juices are extracted with glycerine, and after they have been treated so as to be made innocuous, are kept in sterilized flasks. According to our authors, over 15,000 injections have been made by various physicians in Paris. With such a large experience it is unfortunate that no reports of definite therapeutical results are yet furnished. We trust that these will come later.—*Med. Rec.*

THE ACTION OF STRONTIUM AND ITS SALTS.

In a recent note presented to the *Societé de Biologie*, J. V. Laborde (*La Tribune Médicale*, July 16, 1891) has given the results obtained by him from an experimental study of two salts of strontium, the orthophosphate and the bromide. The results corroborate those previously obtained and reported to the same Society with regard to other salts of the same metal. Both these substances seem to act favorably on the general nutrition.

The strontium was advantageously given to dogs in the proportion of thirty grains of the metal to seventy grains of the orthophosphate per kilo (about two and a quarter pounds) per body weight. To a young and healthy dog weighing twelve kilos (about twenty-seven pounds) were given during 111 days twenty-four and three-sixteenth ounces of the pure orthophosphate of strontium, with apparently no evil consequences. The animal was then killed by puncturing the medulla, and *post-mortem* examinations showed no lesions of the organs. The stomach, the liver, the intestines, the kidneys and lungs were absolutely normal. As in previous observations, there was complete absence of tænia in the intestines of the animal, the cause of this being evident.

Finally, upon chemical analysis, traces only of the metal were found in the liver and the urine; 100 grammes or 1,500 grains of bone gave ten grains of the metal strontium. As the phosphate of strontium is a nutritive and assimilable mineral substance, it is thought that it will render great services, especially in dietetics.

The bromide of strontium seems to be more active than the preceding salt; hypodermatically administered, it produces complete anæsthesia at the point of injection, accompanied with infiltration and œdema. In about fifteen minutes, when the general system is affected, there are noticed diminution of the reflexes, tremors of the head, in the case of a guinea-pig, and a tendency to somnolence and stupor. In three or four hours these symptoms disappear, but the local paralysis, œdema and anæsthesia at the point of injection remain for a longer time; while the reflexes or excito-motor functions are diminished or abolished, the action of the salt upon the cerebrum and upon the peripheral motor and sensory nerves is comparatively slight. To produce these symptoms large doses were administered. Strontium bromide is certainly not very poisonous. For instance, to a dog weighing ten kilos (about twenty-two pounds) sixty grains of the salt were given by the mouth. The animal vomited once, showed restlessness at first, and then went to sleep. With no other deleterious effects the dog entirely recovered. It appears, therefore, that the fundamental physiological actions of the last remedy are similar to those of the potassium salt, with the important practical difference that the first-named substance is less poisonous, and may be said to possess the activity of the potassium and the relative and absolute innocuousness of the metal strontium.

According to the author and from the experimental evidence so far obtained, this salt should be given a trial in those cases where the use of bromide of potassium is indicated.—*Univ. Med. Mag.*

TREATMENT OF THE DEAFNESS OF OTITIS MEDIA SICCA.

Dr. C. Miot (*Gazzetta degli Ospitali*, No. 39, 1891) noticing that the hearing of these patients improved when hyperæmia was present, and secretion of mucus took place, undertook to reproduce these conditions in patients suffering from otitis media sicca by instillations. He dropped in vaseline with and without iodine, which was admirably borne by the mucous membrane of the tympanic cavity, while the hearing became more acute and distinct and the noises were diminished. Chatelier observed at the same meeting that intra-tympanic injections may cause hyperplastic growths of the tympanum. Miot has never observed such effects to follow.

ETHER SPRAY AND COCAINE.

Schleich (*Deutsche Medicinal Zeitung*, 1891, No. 44,) recommends the previous spraying with ether of any part in which cocaine is to be used. It must last half a minute, after which time one can employ

numerous injections of cocaine—not more than 0,01-0, 03—cocaine being necessary to make large areas completely anæsthetic. This same method is to be employed in cases where division of deeper layers is necessary, each one being treated in turn, as was the skin. In this way the author has made small resections and bone operations without giving any pain.

OIL OF PEPPERMINT AS AN ANTISEPTIC IN EAR TROUBLES.

During the past three years Dr. B. Pientkowski (*Deutsch Med. Zeit.*) has been using ol. menth. pip. as an antiseptic in ear troubles, and he reports that it is superior to the other antiseptics now in use. After the ear has been cleansed with a 5 per cent. sol. of sod. sulph., a 5 per cent. sol. of the ol. menth. pip. in alcohol is injected several times and a tampon soaked in the same solution is inserted and allowed to remain 24 hours.

In the most obstinate cases he found that the discharge lessened, and in some cases even ceased within two weeks. He claims the following advantages for it: 1. It does not in the least irritate the mucous membrane. 2. On account of its antiseptic properties and easy diffusibility it stops the process of suppuration. 3. It is absolutely safe. 4. It is not objectionable on account of any bad odor.

ANTIDIAPHORETICS.

1. *Camphoric acid* has been used by Dr. Combemale (*Jour. de Méd.*, March 1st, 1891), as a diaphoric, and has been found to diminish, almost with certainty, the exaggerated functional action of the sweat-glands, having not the great disadvantage of causing phenomena of delirium, nor, like agaric, does it produce free purgation.

2. *Agaricinic acid*, is recommended by Prof. Combemale, of Lille, France, (*Gazzetta degli Ospitali*, No. 51, 1891, *Cincinnati Lancet-Clinic* August 29th, 1891), as a remedy having a decided action in phthisical patients upon the exhausting sweats. It is also efficacious in the sweats of other intoxications and infections.

3. *Hydrastis canadensis* has been found by Dr. Cruse (*Allg. Med. Zeitung*, 1891, *Cincinnati Lancet-Clinic*, August 15th, 1891) an efficient remedy in night-sweats. He tried the remedy in a case with hæmoptysis, and noticed that the night-sweats did not come on as usual. He gave thirty minims of the fluid extract, and always with complete success; and, what is more, the sweats kept off after the hydrastis had been omitted for three weeks. He met with similar good results in a number of other cases.

4. *Ergotine* is praised by Da Costa in doses of 0.10 (1½ grs.) three times daily.

5. *Homatropine gromohydrate* is used by Frommüller subcutaneously, .005—.003 at a dose.

6. *Physostigmine* is recommended in pill form .006 (1-10 gr.) per dose of the extract. Eserine, hydrobromate, sulphate and salicylate are also employed, .001 (1-64 gr.) 3 to 4 times during the night.

7. *Picrotoxine* has been used successfully by Caldwell, Senator and Westbrook, .0012-.003 (1-40 gr.) subcutaneously.

8. *Tincture of Belladonna* is also employed externally, 4 gm. (1 fl. ʒ) of the tincture to 30 grm. (1 fl. ℥) of water (Radakow, *Deutsche med. Zeitung*).

9. *Chloral hydrate* is spoken highly of by Nicolai. Eight grams (2 ʒ) of chloral hydrate dissolved in two glasses of water, and equal parts of this solution and brandy may be sponged onto the body.

10. *Sulfonal* is regarded by Dr. Canteé (*Gazzetta degli Ospitali*, No. 54, 1891) as superior to camphoric acid or the tellurate of sodium in the night-sweats of phthisical patients. It does, however, not yield constant results.

MEDICINE.

THE DIAGNOSIS OF INTRACRANIAL HÆMORRHAGE AND ACUTE SOFTENING.

Dana (*Medical Record*, July 25th) analyses the symptoms in a series of 74 cases, of which 50 were due to hæmorrhage, and the remainder were equally divided between embolism and thrombosis. Premising that his paper is based solely on fatal cases, he points out that brief severe attacks of loss of conciousness with some hemiplegia indicate obstruction, and preliminary mild seizures also indicate obstruction. Consciousness is less permanently and severely affected in cortical and meningeal than in central hæmorrhages, unless the former are very extensive; it is most severely affected in ventricular hæmorrhages, and in the latter consciousness is speedily lost; if convulsions supervene the clot has broken through the cortex to the surface of the brain. If consciousness is not lost at first, but is so shortly after the onset, the case is probably one of embolism. Con-

vulsions never occur at the onset; they are due to hæmorrhage or occasionally to cortical softening. Early rigidity occurs in about half the cases of ventricular hæmorrhage, and is more marked on the paralyzed side, less often in other forms of hæmorrhage, still less frequently in thrombosis, and most rarely in embolism. In hæmorrhage the pupils are contracted and irregular, especially if the lesion is cortical or meningeal; the pupil on the side of the lesion may be dilated. Alternate conjugate deviation signifies a surface lesion. Some loss of cutaneous sensation occurred in a fifth of the cases of hæmorrhage, and in a much larger proportion of cases of softening. The peculiarities of the temperature in acute softening as distinguished from those in hæmorrhage are the rarity of primary subnormal temperature, and its presence, if it does exist, only on the non-paralyzed side; also the slighter tendency to inequality of the temperature on the two sides and its slower rise if a rise occurs. —*Brit. Med. Jour.*

HEREDITARY TREMULOUSNESS.

Most persons are aware that it is not rare to find several members of a family with shaky hands. So many symptomatic forms of tremor have been distinguished by living authorities on nerve disease that the subject of hereditary tremulousness is of interest. M. Debove has recently contributed an essay on this question to the Paris Société Médicale des Hopitaux. He has traced some distinct family histories. Hereditary tremulousness is, he says, a distinct disease. It runs both in the paternal and the maternal line. It begins in childhood and increases with age. The oscillations are rapid, 8 to 10 per second; they cease during complete rest. The tremors are noted when the hand is held out straight, continue when it is voluntarily moved, but without exaggeration. They may involve the extremities, the eyelids, lips and tongue. The upper extremeties are the seat of predilection in this disorder. Differential diagnosis is important. Comparing the above symptoms with tremor in other diseases, it is found that in senile tremor the head is chiefly involved, the vibrations are slower (3.5 per second), and the disorder appears late in life. In paralysis agitans the tremors continue during rest, and are accompanied by contractions. In disseminated sclerosis the shaking is increased during voluntary movement. In general paralysis the tremors involve the tongue and modify the speech in a characteristic fashion. Alcoholic tremors resemble the hereditary form, except that in the drunkard there is a distinct trembling of each finger not observed in Dr. Debove's hereditary cases. Mercurial tremors intermit during rest, and are produced or exaggerated by voluntary movements; they greatly resemble the corresponding symptom in sclerosis. In exophthalmic goitre the trembling involves the trunk and members, but spares the face and tongue. Dr. Debove considers that hereditary tremulousness requires further investigation.—*Brit. Med. Jour.*

SUGGESTIONS RESPECTING SCIATICA.

Dr. G. Eliot (*N. Y. Med. Jour.*) says:

A large proportion of cases of sciatica are neuritis, and not simply neuralgia.

Temporary relief of suffering should be secured by hypodermic injections of morphine, atropine, or of theine.

Among the curative agents salicylate of sodium and iodide of potassium are especially valuable—the former in acute, the latter in chronic cases.

Considerable benefit may often be derived from the administration of the more purely neurotic drugs—aconite, belladonna, and gelsemium.

Cantharidal blisters are of very great service in promoting the cure of the disease, when used in conjunction with appropriate internal treatment.

COMPLETE PARALYSIS OF PHARYNX AND LARYNX AFTER DIPHTHERIA; EXTREME PROSTRATION; RECOVERY AFTER SUBCUTANEOUS INJECTIONS OF STRYCHNINE.

F. N., a previously healthy young man, aged 22, was admitted on February 9th, 1891, suffering from increasing general weakness, especially of the lower limbs, and partial paralysis of the pharyngeal muscles, the soft palate being motionless and insensitive. The voice was "nasal," and fluid food occasionally returned through the nose, but deglutition was unimpaired for solid food. He had been attacked two days after Christmas, 1890, with diphtheria, from which he had suffered acutely for two weeks, the symptoms of paralysis coming on within a fortnight of the presumed recovery from the acute disease. General muscular weakness and the pharyngeal paralysis were at first the only symptoms. The knee-jerks and superficial reflexes were still present but delayed. All the functions appeared to be normal ex-

cept the action of the bowels, which was very sluggish. There were no ophthalmic symptoms; the lungs were quite free, and the heart's sounds fair. The pulse was about 88, and the temperature sub-normal. For the first ten days there was no obvious change, but on the eleventh the breathing became shallow and a troublesome cough came on, which was manifestly due to the entrance of food into the air passages. The muscular weakness was not quite so great, but the knee-jerks were quite absent. Two days later the patient's condition was very much worse. The voice was entirely lost, as also the power of coughing, and by the laryngoscope it was seen that the vocal cords were motionless in the cadaveric position, and that only the most feeble adductor movements could be induced by the attempts at phonation. The patient was then in such a complete state of prostration that nutrient enemata could no longer be retained, and attempts to feed through an œsophageal tube were equally unsuccessful owing to the completely paralyzed state of the muscles of deglutition. A certain amount of conjective broncho-pneumonia had been set up by the attempts already made, and the patient was quite unable to rid himself of the bronchial mucus, so that it was necessary to invert the upper part of his body over the edge of the bed from time to time to allow the discharges to trickle out. The heart's action was very rapid and feeble, and it appeared that nothing but a fatal termination could be possible.

Subcutaneous injections of strychnine (3 minims of the liquor strychniæ) were administered, and within a short time a decided improvement in the strength of the cardiac action was noted; and little by little, as these injections were repeated, a steady improvement took place. On the following day the respiratory movements were deeper, and the sputum could be forced out, although no cough could be produced. In the course of the next two days the general improvement continued, and nutrient enemata could be retained; the muscles of respiration and deglutition showed decided increase of power. The soft palate was motionless still, but there was slight return of sensation on one side of it. The laryngoscope showed that slight movements of adduction were produced in the vocal cords, although they could not be abducted beyond the cadaveric position. On March 2nd, a painful purulent discharge due to suppurative inflammation of the middle ear set in. The patient seemed to be losing ground again, and the muscular weakness became very much more marked in the limbs, while signs of the broncho-pneumonia, which had almost subsided, reappeared in the left lung. Once more the injections of strychnine were resorted to, 5 minims being given every four hours. Improvement followed, and within five days the soft palate was seen to move well for the first time, full sensation having returned to it. The laryngeal movements were perfect as far as adduction and tension were concerned, but abduction, although much more free than it had been, was still far from complete. During the next month, while the powers of respiration, phonation, deglutition were completely restored, there was no corresponding recovery of muscular power in the limbs. By slow degrees these movements have been nearly recovered under careful rubbing, faradization, and practice of movements in a wheel chair. The patient is now convalescent.

Remarks.—The chief interest in this case centres round the fact that recovery is possible after the most extreme degree of paralysis after diphtheria. The patient at his worst had all the aspect of a dying man, being absolutely prostrate, unable to move, only breathing by the most shallow respiratory movements, and unable to rid himself of the mucus in his tubes without mechanical inversion. He had, moreover, the peculiar sour, earthy smell which has so often been described as associated with the approach of death. The mode of recovery of the laryngeal movements is especially interesting, as illustrative of the law insisted upon by Dr. Semon and others, that paralysis of the vocal cords affects the movements of abduction before those of adduction, and that recovery takes place in the reverse order, abductor power being recovered before the movements of adduction returns.—*Dr. Clifford Beale, in Brit. Med. Jour.*

ON LEUCODERMA SYPHILITICUM.

Following Professor A. I. Pospeloff's suggestion, Dr. Fiveisky, of Moscow, has carried out an extensive series of elaborate clinical observations, mainly on prostitutes, inmates of the Miasnitzky Syphilitic Hospital, in order to study the clinical history and diagnostic value of "*leucoderma syphiliticum.*" The outcome of the author's important and exhaustive research may be summed up somewhat as follows:

1. Leucoderma syphiliticum, or "primary pigmentary syphilide," constitutes a very common cutaneous manifestation during the

condylomatous stage of syphilis. Most frequently it is localized on the lateral and posterior surfaces of the neck, but sometimes, besides those classical regions, it may also affect the lateral aspects of the chest, the epigastric region, and, though exceedingly rarely, the thighs. It never attacks either the hairy scalp, or face, the inner surface of the mamma, the buttocks, forearms, hands, legs, or feet.

2. There exist three distinct varieties of the exanthem, which may be termed *leucoderma marmoraceum*, *l. maculosum* and *l. retiforme* ("lace-like form").

3. In 40 per cent. of cases the rash makes its appearance during the third month after the first syphilitic symptoms [concerning which point—as well as some others—Dr. Fiveisky differs from Dr. Ehrmann: *vide* the *British Journal of Dermatology*, August, 1889, p. 346], in 20 per cent., during the fourth; in 20 per cent. during the fifth; and in the remaining 20 per cent., in the course of the second half of the first year.

4. Occasionally it may be observed simultaneously with gummatous manifestations.

5. In women, leucoderma occurs more frequently than in men; thus, it is observed in from 45 to 49 per cent. of all female condylomatous cases, and only in 28 per cent. of male ones. [Professor Fournier found the rash in 50 per cent. of female patients, and in 35 per cent. of male.]

6. In some cases the exanthem proves to be limited to a certain isolated area, while in others it may occupy a more or less extensive cutaneous territory.

7. In men, the extensive form is met with nearly thrice as frequently as in women; it is observed in about 50 per cent. of all male cases of leucoderma, and only in 18 per cent. of female cases.

8. The disease commences with an increased pigmentation of the skin (usually of the neck). After a while there appear minute circular or oval white patches or islets, which gradually increase in size to attain about that of a sixpenny piece. Subsequently the lesions become stationary, to persist for a more or less prolonged period, after which the white spots gradually grow less pronounced, and ultimately disappear without leaving any mark.

9. The duration of the rash varies from one to seven years. Most frequently it lasts three or four years.

10. In the case of a relatively late development, the manifestations of leucoderma are usually mild.

11. An intense rash of the kind, as a rule, develops in such patients as either have not undergone any mercurial treatment about the beginning of syphilis, or in whom the specific treatment has been irregular or defective. In those who have been subjected to an early and regular mercurial treatment, the cutaneous affection commonly assumes a mild form. Neither mercury, however, nor iodide of potassium produces any apparent impression on the course or duration of the exanthem itself.

12. Leucoderma constitutes one of the most characteristic and most reliable diagnostic signs of condylomatous syphilis.

[In the course of a discussion at the meeting, Professor Pospeloff stated that according to his opinion, leucoderma offers even a more common and a more important diagnostic sign of syphilis than enlarged lymphatic glands.]

Professor A. H. Gay, of Kazan, indicated the possibility of the rash involving the hands as well. Thus, he happened to observe a case of a young man in whom, about three years after the infection, a typical leucoderma developed on the dorsal surface of his fingers.

Several years ago Dr. Jebüneff, of Kharkov, also indicated (Sprimon's *Medicine in* 1886, vol. ii. p. 956) the high diagnostic value of the exanthem. He even laid down the proposition that leucoderma occurs solely in syphilized persons. According to his observations on twelve prostitutes, the rash tends to spread *pari passu* with the advance of the condylomatous stage of syphilis.

At a meeting of the Sevastopol Naval Medical Society, Dr. Gavril N. Grivtzoff, of Nikolaiev, read a paper on the subject (*Meditzinskia Pribavlenia K'.Morskomü Sbornikü*, April, 1891, p. 230), in which he relates a case of an unusually extensive leucoderma, involving the neck, chest (both anteriorly and posteriorly), lumbar region and thighs. The most interesting feature of the case, however, consisted in the fact that the rash developed in the course of a *gummatous* stage, appearing simultaneously with a movable subcutaneous gumma (about the left elbow joint), neuritis of the right ulnar nerve, considerable exostoses of various bones, and arthoopathies. The author is inclined to believe that the exanthem in his patient (a sailor) was of nervous origin.—*Jour. Cut. Dis.*

OBSERVATIONS UPON THE TREATMENT OF CERTAIN CASES OF FATTY HEART.

Dr. Arthur H. Weiss Clemon in the *Med-*

ical Press, states there are three objects toward which treatment of these cases must be directed:

Firstly. To get rid of the fat already superabundantly accumulated in the tissues.

Secondly. To prevent its further deposition.

Thirdly. To improve the efficiency of the heart muscle.

These indications are accordingly to be met in the following manner:—

Firstly. By a systematic course of well regulated exercise, which by increasing the process of oxidation shall necessitate an increased consumption of stored-up fat, and its consequent removal.

Secondly. By prescribing a dietary which shall contain a minimum of fat forming articles, and in which the amount of fluid ingested is restricted to the smallest quantity.

The third indication is met in attending to the other two, but some further assistance may be given in the careful exhibition of such heart tonics as strychnia, digitalis, and strophanthus.

Regarding the exercise, the form advocated by Oertel is the systematic practice of long walks, especially in mountainous districts, the effects of which may be briefly summarized as follows:—

1. The process of tissue oxidation is increased, and consequently accumulated fat is consumed.

2. The increased demands made upon the heart's activity, as shown in the increased number and force of its contractions, has the same effect in improving the tone and contractile power of the organ that the practice of ordinary gymnastic exercises has upon the development of voluntary muscular power.

3. The increase of the loss of water from the body, due to increased perspiration and loss through the lungs, tends to an improvement in the quality of the blood, both by diminishing its volume, and increasing its concentration. Proportionately to its bulk, it is easy to understand that its oxygen-carrying power is likewise increased.

Regarding the dietary, in the first place it stands to reason that only the smallest quantities of fat-forming elements (fatty foods and carbohydrates) must be permitted. If under these circumstances, owing to increased muscular activity, the combustion of non-nitrogenous elements in the body exceeds the amount supplied in the form of fat and carbohydrates in the food, the increased demand must be met from the fat already stored up in the tissues; in other words, the patient's obesity will be attacked, and he will get thinner. "If the fat destruction due to severe exertion be repeated at short intervals of time, the fat stores of the body will be encroached upon more and more and a minimum will be finally reached beyond which we cannot go."

On the other hand, the dietary must contain a large amount of nitrogenous food. This is necessary for the purpose of restoring the integrity of muscular fibres of the heart that are already in a weak or degenerated condition, as also for meeting the demands upon the muscular system in general decreased activity.

The amount of fluid ingested must be reduced to a mininum. This reduction alone exercises an influence of no considerable importance in the removal of fat. Oertel mentions two cases in which a considerable and rapid fat reduction was thus effected, no alteration whatever having been otherwise made in the patient's dietary or mode of life. Reasoning from the fact that the deposit of fat always take place in or upon the adventitia of previously formed blood-vessels, Oertel argues that its formation in quantity is dependent upon the occurrence of local vascular dilatations in which there is a considerable retardation of circulation. Owing to the diminution of the watery constituent of the blood, the total quantity of fluid circulation becomes reduced, the circulation is quickened, venous stasis is removed, and the conditions favorable to fat accumulation being thus altered further deposition does not take place. In addition it seems probable that the imbibition of a considerable quantity of fluid favors the absorption by the lacteals of the products of digestion, and thus indirectly aids fat formation.

The strengthening of the heart muscle it is easy to understand, must necessarily follow upon the course of systematic exercise, as already explained; the improvement in the quality of the blood at the same time by increasing its nutritional value aiding in the building up of an improved quality of muscular fibre. The additional assistance to be gained by the administration of such cardiac tonics as strychnia, digitalis and strophanthus is at the same time by no means to be despised.

SURGERY.

THE TREATMENT OF OBSTINATE SCIATIC PAIN BY SPLINT-REST AND COLD.

Dr. S. Weir Mitchell states (*International Clinics*, Vol. I) that in cases of sciatic neu-

ralgia—slighter forms, without marked organic changes—recovery, as a rule, occurs after rest for a few days, dry cupping, sinapisms, care as to gouty or other constitutional state. But even these cases may become chronic, and end in a true congestive and inflammatory condition.

Generally sciatica is not a functional disorder, but an organic disease from the first, and is represented by inflammation of the sheath of the nerve, the connective tissue, and neurilemma. It is these cases of grave sciatica or sciatic neuritis which Weir Mitchell specially considers in his paper. The symptoms are described briefly. The long duration of the disease, for months or years, the affection of nutrition of the leg and of its sensibility in variable degrees, are pointed out. Generally old sciatica is single; pain in both nerves may be due to spinal or caudal disease. After eliminating rheumatism, gout, syphilis, trauma, and pelvic growths, and deciding that the case is one of neuritis, Mitchell considers the most certain indication is to secure rest; not simply by keeping the patient in bed, but by means of a long splint. An old fashioned long splint from the axilla to the foot may be used, or a roughly moulded anterior splint, with a wooden attachment carried up laterally to the waist or axilla. The ankle must be so sustained "that the heel does not carry the weight of the leg." The knee must be gently flexed, and the angle of flexion changed a very little at each dressing. After a few days of undisturbed rest all the joints must be carefully and slowly flexed and extended to a slight extent, to prevent too great stiffness, the common evil which follows the use of a splint. Only sufficient bandage to keep the splint in position ought to be used. If the patient cannot bear a long splint, an anterior suspension splint may be of some service.

By this simple treatment, many cases of chronic sciatica may be overcome, which have defied more elaborate treatments. But if the case be not cured thereby, Mitchell recommends the daily use of Paquelin's cautery button at the pain points. If still obstinate, he employs *dry cold*. An ice bag of caoutchouc is kept on the painful nerve tract, day and night, for two or three weeks; or the leg is placed on a tin or copper gutter, on the under part of which is an ice case three or four inches wide. This method of treatment by dry cold, though described by Mitchell many years ago, has been little used by others. As the pain disappears, the use of cold is diminished until it is only applied at night, or, for an hour or two, twice a day. If any pain-points remain, the use of the cautery is often valuable, but is apt to interfere with massage treatment, which is so helpful at this time. At this state Mitchell employs kneading of the muscular masses of the leg, and also a gradually deeper surface rubbing in a downward direction over the nerve trunk, for half an hour twice a day. When the pain has disappeared, "it is wiser for a while that at first the patient stand aided by crutches, and then walk with them, and not sit up long, as this brings pressure on a nerve which may still be sensitive."

Often the patients are thin and anæmic, and *general* massage is of service after the rest treatment has been employed for some time; but at first it must be avoided in order that the resting limb may not be disturbed.

As regards general treatment, iron and cod liver oil are given, and milk or soups between the meals.

Strong galvanic currents may be of service in the milder forms of sciatic neuritis, but this treatment is as painful and less efficient than the cautery. If the wasted limbs do not gain in size and tone at the close of a treatment, the stimulation of the induction current may aid in producing a more rapid result. Mitchell states that he has never met with a case of sciatica in which he was obliged to resort to nerve stretching. He has seen nerve stretching cure sciatica, but prefers to see what medical means will do first, and points out that nerve stretching is liable to fail like all other means. In double sciatica, probably due to caudal disease, he is more willing to think of surgical aid.

The treatment of chronic sciatica by splint-rest and dry cold, as above described, is more apt then other means to effect permanent cures, and Mitchell has many times seen it triumph when all else had failed.

THE TECHNIQUE OF SUTURING IN OPERATIONS UPON THE STOMACH AND INTESTINE.

H. Braun (*Deutsch med. Woch.*) asserts that by far the greatest number of fatalities in operations upon the gastro-intestinal tract is due to the inefficiency of the means employed to prevent leakage into the peitoneal cavity. The following modification of the usual method employed by B. for the past six years is brought forward: Those portions of the digestive tract that are to be united to each other or to the abdominal wall are secured to each by a single row of

sutures through their serous surfaces. The serous and muscular coverings of each portion are now incised at a slight distance from the first row of sutures, the depth of these incisions corresponding to the submucous cellular tissue. The incised portion of each loop is now made to approximate its fellow and the suturing completed. The object of the incision of the wall of the stomach or intestine is to enable the surgeon to determine the exact depth to which the needle may be passed in order, on the one hand, to avoid penetrating the lumen of the organ, and on the other to secure as firm a hold upon the tissues to be united as possible. In cases in which communication is to be established between two portions of the intestinal tract, or between stomach and intestine (intestinal anastomosis—gastroenterorrhaphy), the mucous membrane is incised after placing the above-mentionad sutures in situ, and before tying the same a portion exercised if necessary and a separate row of sutures placed therein.

EXCISION OF THE APEX OF A TUBERCULOUS LUNG.

La Gazetta Médica de Granada reports a case of the successful excision of the apex of a tuberculous lung by Dr. Tuffieri, who, prior to the operation, had satisfied himself of its safety by a series of experimental operations on the lower animals. Cutting through skin and some fibres of the pectoralis major, Dr. Tuffieri laid bare the intercostal muscles of the second intercostal space, and cutting through these he exposed the parietal layer of the pleura which he detached from the thoracic parietes. Opening the pleura, he found the lung apex studded with tubercle and slightly shrunken. Round the apex he passed a ligature, which he attached to the second rib, and then excised five centimetres of the tuberculous mass. The patient was on his recovery exhibited before the Surgical Society.

FOREIGN BODIES IN THE LARYNX, ETC.

Dr. Schoyler, of Berlin, extracted (*Journ. of Lar. and Rhin.*, August, 1890) from the trachea of a girl of nineteen a needle attached to a feather. It had been aspirated, and could not be removed by traction on the feather. Laryngoscopic examination showed that it was fixed with one end in the bifurcation of the trachea and with the other on a tracheal ring. The needle was liberated by the aid of a probe introduced between it and the trachea.

A case of sudden death from escape of milk into the air-passages is reported by Dr. Emile Müller (*Gaz. Méd. de Strasburg*, April 5, 1890). A child, five months of age, had no other indisposition than slightly difficult respiration when lying on its back. One morning, after having been nursed and laid down, it made a grimace as though sick at the stomach, became blue, and died in a few moments. At the autopsy the thymus gland was found larger than is usual, and the larynx, trachea, right bronchus, and all its divisions were found filled with milk. The size of the thymus explained the difficulty of respiration alluded to.

Mr. Lennox Browne reports (*The Medical Press*, December 17, 1890) an instance of supposed laryngeal cancer or phthisis in a lady thirty-five years of age, from whose larynx he had removed an impacted plate of artificial teeth which, from the history, had been aspirated into the larynx twenty-three months previously, probably during an epileptic seizure. Six weeks after its removal the patient had regained twenty-three pounds of her lost weight. It is remarkable that laryngoscopic inspections had been made by four gentlemen who had failed to detect the presence of a foreign body.

Dr. William Macewen reports (*Glasgow Med. Journ.*, December, 1889) a case in which a nutshell lodged in the trachea for thirteen days was removed by tracheotomy during impending suffocation. It was found buried in the posterior wall of the trachea just under the cricoid cartilage, lying obliquely, and covered to a great extent with granulative tissue, one thin layer of which was spread over the surface of the nutshell. When removed with forceps its concave surface was found to contain a mass of granulation tissue surrounding a portion of the kernel.

An interesting case from the practice of Prof. Sonnenburg is reported by Hermes (*Deut. med. Ztg.*, June 23, 1890). A girl, aged seventeen years, had swallowed a needle the September previous, and had since suffered with intense gastric pains, compelling her to keep the body bent forward. The parts were cut down upon and a projecting point was found in the posterior edge of the transverse fascia. The peritoneum was incised at this point and the needle was found in a mass of connective tissue in which it had beeome engaged after

having perforated the stomach.—*Amer. Jour. Med. Sci.*

SPINAL SURGERY IN POTT'S DISEASE.

Chipault, (Arch. gén. de Méd.) says that Surgical intervention in spinal caries may have one or two objects which are often combined, viz.: (1) The discovery and removal of the focus of bone disease, and (2) the relief of pressure upon the cord, due to a sequestrum, an intra-spinal abscess, or the tubercular fungosities of external pachymeningitis.

I.—*Discovery and removal of the bony lesion.*—Occasionally the disease is localized in the arches of the vertebræ. If there be no suppuration this will often do well with fixation and expectant treatment, but if there be an abscess or a sinus the diseased parts should be scraped away (Lannelongue). These cases are, however, few. Six examples of such operations are recorded, all of which were successful except one, in which paralysis supervened from causes apparently unconnected with the operation.

For disease of the vertebral bodies Treves' operation (*vide Med. Chir. Trans.*, 1884) is cited, and reference made to certain technical modifications by Delorme. In regard to this operation the following anatomical points are noted: (1) The extensor muscles in children rarely extend far to the outer side of the transverse processes of the lumbar vertebræ. (2) The incision should be made about a quarter of an inch nearer to the middle line than is the outer border of the muscular mass. The muscle when exposed shrinks towards the middle line, and this incision brings us to its outer border. (3) Certain varieties in the position of the lumbar vessels are discussed. (4) The psoas should be separated from above downwards, when access to the anterior surface of the lumbar vertebræ is obtained without injury to important structure. (5) The peritoneum is perfectly safe. This operation of exploring lumbar caries from the back, and of thus scraping carious bone or removing sequestra, is commended in cases in which there is suppuration, and four cases are quoted in which the abscess passing towards the iliac region was thus successfully opened in the loin (in two others the iliac abscess proved not to be of vertebral origin, but the operation did no harm). In cases where the abscess points in the loin, this is naturally the method of evacuation. A few cases are recorded in which a similar operation has been applied to caries of the bodies of the dorsal vertebræ, but the indications are rare, as we must have an abscess pointing backwards. Altogether there are collected fourteen operations upon the vertebral bodies (eleven in the lumbar region), with eight recoveries, one death, and five cases relieved.

II.—*Relief of pressure upon the spinal cord.*—In these cases the above-considered indication for treatment can also be fulfilled when the bony lesion is in the arches, and the removal of one of these simultaneously frees the cord and excises the disease. Very rarely both indications are also fulfilled in cases of disease of the body, as in a solitary case of Israel's, in which a cold abscess having burst into the spinal canal, operation relieved the pressure on the cord, and allowed of removal of half the body of the twelfth dorsal vertebra. The patient died.

Of cases of true laminectomy the author collects 35 instances, two being original, 22 published, and the remainder obtained by personal communication. In twenty there was improvement or complete cure. In all of these the improvement began within a few days or hours of the operation, and proceeded steadily. As a rule sensation returned first, and from above downwards, motion later, and from below upwards; the sphincters recovered early. The fifteen cases not improved divide themselves into two groups—(*a*) those in which primary improvement is followed by return of symptoms, and (*b*) those in which the operation is without effect. In the first group the cause of recurrence may be the supervention of acute curvature, or the re-growth of granulations. The second source of failure is, in some cases, an incomplete removal of granulations; in others, possibly, a too great destruction of the cord tissue. Of ten deaths three were due to injury to the cord at the time of operation, four to generalized tuberculosis, and two to the severity of pre-existing complications.

The author concludes that we should operate only when the general health is good, and when the spinal symptoms are severe and do not yield to other treatment. Children do much better than adults. Of bad prognostic import are a high position or extensive distribution of the disease.

The technique of the operation is fully discussed, but without addition to our previous knowledge. The paper contains the most complete recent account of this branch of surgery with which I am acquainted.

GYNÆCOLOGY.

THE INFLUENCE OF THE CLIMACTERIC UPON FIBRO-MYOMATA.

Müller (*Archiv. f. Gynäkologie*) has made a careful study of this subject, based upon 109 cases. He found that while in many cases the tumor evidently diminished in size after the menopause, in nine instances it was clearly proved that the neoplasm continued to grow; such an increase in size was noted in women aged fifty-six and seventy-nine respectively. He infers that it is not safe to trust too much to the curative influence of the menopause.

In opening the discussion Werth took occasion to differ from Hofmeier regarding the effect of castration. The removal of the ovaries had, he believed, a direct atrophic influence upon the tumor. When menstruation ceases its vascular supply is diminished, but if the hemorrhages continue, atrophy does not take place. Tait's statements on this question were valueless.

Benckiser stated that in examing a fibroid uterus removed three months after castration had been performed, he found the same atheromatous changes in the vessel walls which were so often observed after the climacteric. This was a form of obliterating endarteritis which Thoma had described as a result of extensive arrest of the capillary circulation of an organ.

Veit said that he had seen large myomata increase in size in elderly women. He did not expect retrograde changes to take place in the tumor before the age of fifty or fifty-four. Progressive increase of the neoplasm after the climacteric must be due to some unusual source of blood-supply.

Fritsch had found that the occurrence of both the artificial and the natural climacteric arrested the growth of the tumor. If it continued to grow, it was usually due to cystic degeneration of the neoplasm.

STENOSIS OF CERVIX FROM CAUTERIZATION.

Dr. Fraisse, of Roubaix (*Nouvelles Arch. d' Obst. et de Gynéc.*, July, 1891), owing to a terrible case in his own experience, warns the gynæcologist and practitioner against unskilful and meddlesome treatment of uterine disease. A similar case was recently reported by Fochier, of Lyons. A robust woman, aged 27, was taken with labor pains at the end of her fifth pregnancy (exclusive of three abortions). The first stage was very lingering. On examination the os was found to be smaller in circumference than a sixpence and perfectly undilatable, being almost completely surrounded by cicatricial bands of woodlike toughness. Only one quarter of the border of the os was healthy. It transpired that about three months before this pregnancy the patient's cervix had been freely cauterized, and caustics of all kinds had been applied to the uterine cavity. Not only did impregnation occur, but the pregnancy went on without complication until labor. Drs. Godefroy and Fraisse found that the child could not be delivered until either the cervix was divided or Cæsarean section performed. Division of the cervix was almost impracticable owing to the high and backward position of the os. As the cicatricial bands often involve the lower part of the uterus itself, section through them might produce deep rents into or even through the substance of that organ. The patient was left alone for a few hours, the attendants hoping that the os might yield. Violent labor pains came on for an hour in the night and suddenly ceased, the patient appearing collapsed. Dr. Godefroy detected rupture of the uterus, with expulsion of the fœtus into the peritoneal cavity. The fœtal head no longer pressed on the cervix. The os was as rigid and undilatable as before. On the healthy quarter of the cervix—the portion free from cicatricial bands—the lower angle of a laceration could be felt; no doubt this represented the starting point of the uterine rupture. The laceration ran obliquely backwards and to the right. The patient, who was completely collapsed, felt no pain. Porro's operation was at once performed by Dr. Fraisse without anæsthetics. The fœtus was alive, the peritoneal cavity full of liquor amnii, liquid blood, and clots. The child died within a few minutes. The mother lived fifty hours. The previous cauterizations were the direct cause of the disaster. The rigid cauterized tissues of the cervix would not yield, so that the softer healthy tissue gave way during a violent contraction. Dr. Fraisse hopes that this example will warn those who persist in applying caustics to imaginary ulcers, and induce them to abandon that antiquated and barbarous practice. Dr. Godefroy adds to the above report the note of a case where the patient had pains in the perineum, evidently due to fissure of the rectum. An *officier de santé* insisted that uterine disease was present; he freely cauterized the uterus, and the patient died from the effects.—*Brit. Med. Jour.*

OBSTETRICS.

THE USE OF ANTISEPTICS BY MIDWIVES.

Budin (*Le Concours*, February 15, 1890) makes reference to the part which has heretofore been played by midwives in respect to the propagation of puerperal fever, and this suggested the question—what antiseptic, if any, should be placed in their hands for use among parturient women? The use of boiled water would be perfectly safe for them, but on the other hand this would not destroy pathogenic germs, though it might have efficiently cleansed their arms, hands and nails. As to the choice of antiseptics, it is not to be expected that midwives will be acquainted with the relative value of all of them, and the different ways in which they should be used. First of all, too, one must overcome the prejudice which many of them have to the use of antiseptics, and this can best be done by reducing the methods of using them to the simplest terms. It was finally recommended that only one antiseptic be given to midwives, and this in such a form that the minimum of danger would result from its use both to their patients and themselves. It must also be cheap, and easily kept and carried. The merits of boracic acid, creoline, naphthol, carbolic acid and sublimate were all considered, and the last was chosen, notwithstanding the possibilities of poisoning in some cases. The author has had extensive experience with sublimate in midwifery practice since 1882, and has never seen any severer results from it than an occasional gingivitis or erythema. It is said that sixteen cases have resulted fatally from sublimate injections into the uterus, but in fourteen of these the solution was too strong, being 1–1000 or 1–2000. Also in two of them it must be admitted that there had been no injections into the uterus. In these cases the perinæum had been badly torn during labor, and irrigation with a 1–1000 solution was practiced while the wound was being closed. In some of the cases also there was nephritis or profound anæmia from hæmorrhage, or retention of the placenta, and thus intoxication with mercury was favored. Intra-uterine injections should not be made by midwives, and should parturition be followed by fever a competent physician should at once be called. The effect of sublimate solutions upon the newborn is far more favorable than is carbolic acid.

CÆSAREAN SECTION.

Dr. E. Fraenkel (*Deut. Med. Wochenschr.*, August 13th, 1891) publishes two further cases of Cæsarean section, and reviews the present aspect of Sänger's improved method of performing the operation, showing especially how greatly the at first complicated method has recently been simplified. Indeed, apart from the asepsis and the accurate suturing of the uterine wound, the numerous details, at first regarded as necessary, have been abandoned. Silk is now admitted to be the most satisfactory material for sutures, as well as in every way most convenient. For closing the uterine wound it is neither necessary to avoid the decidua nor to use sero-serous (symperitoneal) stitches. Great care, however, must be taken that the edges of the wound are very accurately united and that the sutures are sufficiently close together (not more than 1 centimetre apart). Fraenkel considers that Cæsarean section in its improved but the simplified form can quite well be performed in private practice with but a small armamentarium and three assistants. This being so, much less hesitation need be felt before resorting to the operation than formerly.—*Brit. Med. Jour.*

THE FAVORABLE TIME FOR IMPREGNATION, AND THE VITALITY OF THE SPERMATOZOA.

Prof. Bosse (*Archiv. Obstet. Gyn.*) has made some interesting studies on these points, about which considerable differences of opinion have prevailed among authorities.

First, as to the most favorable time for impregnation. His first series of observations were with women who became pregnant for the first time immediately after marriage, and wives of sailors where the date of intercourse could be definitely established followed by periods of long absence.

There were twenty-seven such cases, in all of which except one the date of confinement made it probable that impregnation occurred during the four days immediately following menstruation. In the exceptional case, intercourse took place seven days before menstruation, and not again for a month. There are two alternatives, either that the confinement was tardy, as it did not occur until the 285th day, or that as the author has shown is possible, the spermatozoa retained their vitality in the vagina

until after the menstruation, and impregnation occurred then.

His second series of observations is of cases of artificial impregnation. He reports eleven cases, of which nine were successful. In one the successful injection was made the day before the menstruation occurred. In the remaining eight, after several unsuccessful attempts at other periods, the successful injection was made in five cases in the twenty-four hours following the cessation of the catamenia; in two, on the second day; and in one, on the third day.

His third series of experiments was made to determine the length of time during which the spermatozoa retained their vitality in the vagina. His methods which should be studied in the original were apparently conducted with the most scrupulous care, and the results he arrived at were as follows:

1. Of eight cases where the semen was deposited in the vagina before the menstruation and examined for afterwards, in four no spermatozoa were found; in three they were found alive; in one dead.

2. Of twelve cases where the semen was deposited after the menstrual period, in four no spermatozoa were found; in eight they were found living at from three to seventeen days subsequently. These investigations justify the author in concluding that the favorable time for impregnation is immediately after the catamenia, that the spermatozoa may retain their vitality for at least seventeen days in the vagina and even through a menstrual period, and that cases of prolonged gestation may be explained by the fact that fecundation may have taken place a number of days after the last cohabitation.

While there is a great liability to error in investigating so delicate a subject as this, yet these observations seem to have been very carefully made, and are a valuable contribution to the subject.

PÆDIATRICS.

THE TREATMENT OF CHRONIC CONSTIPATION IN CHILDREN.

Certain errors in the treatment of this most troublesome disorder are pointed out by Dr. Cheadle in the *Pratictioner* for July. Three devices seem to be most commonly adopted. The administration of more or less active purgatives from time to time, the dose being repeated as often as the bowels become confined; the use of enemata with more or less regularity; and the use of coarse foods and fruit. The chief point of error in these methods lies in the fact that chronic constipation is a recurrent and habitual condition, while the treatment is intermittent and spasmodic. Purgatives thus given lose their effect after a time, frequent stimulation of the bowel rendering it less and less sensitive. Most cases, however, of prolonged and obstinate constipation require drugs in their treatment. The constant daily use of some mild laxative is essential to ultimate success. Treatment, to be effective, must be continuous. Spasmodic, intermittent, and excessive treatment will invariably fail.

COMMON ERRORS AND FALLACIES IN THE TREATMENT OF CHILDREN.

Cheadle, (*Practitioner*, July, 1891), writes that the chief points with regard to which faulty practices prevail are the following:

1. *The sudden weaning of infants onto fresh cow's milk and water.*—The large curds of cow's milk are often beyond the feeble digestive power of the infant. The undissolved clots under favorable conditons of heat and moisture ferment and set up colic, vomiting, or diarrhœa. Boiled milk with barley-water seems to be much more readily digested. In the case of very delicate children the milk should always be peptonized at first.

2. *Insufficient gross amount of nutritive material.*—For example, a child is found unable to digest a mixture of cow's milk stronger than one in four. The capacity of the stomach, however, is limited, and it is impossible for it to take a sufficient quantity of this mixture to supply the material required for growth and nutrition. The difficulty may be overcome by adding some cream or perhaps some of Valentine's meat-juice.

3. *The use of food deficient in fat.*—This is an element of especial importance in the food of children, but is almost wholly wanting in most artificial foods, and is deficient in most condensed milk.

4. *The use of food deficient in proteid.*—Most artificial foods are lacking also in nitrogenous matter. Children deprived of these two elements are often large and fat, but are anæmic, flabby, and rachitic.

5. *The use of diet deficient in antiscorbutic elements.*—This is a point that is frequently overlooked. All condensed foods, farina-

ceous foods, and dry artificial foods are lacking in this regard, and should be supplemented by some fresh element.

6. *The prolonged use of artificially-digested foods.*—These preparations do excellent service in the case of children just weaned, or with small power of digested cow's milk. If they are continued for months the power of digestion becomes seriously impaired, nutrition falls off, and the child becomes anæmic and rachitic.

In the management of diarrhœa numerous errors are prevalent, one of the most common and dangerous, perhaps, being the idea that a moderate amount of diarrhœa is beneficial. So far from diarrhœa being a safeguard against convulsions, it is precisely those children who have been reduced by diarrhœa and vomiting who are most liable to them. Young children bear purging badly. A diarrhœa which begins moderately is apt to develop dangerous proportions in a short period and reach a point beyond control of medicine. The younger the child the greater the importance of getting a diarrhœa quickly under control. As regards food, give nothing that is not sterilized, nothing that is not predigested or easily digested. Astringents are useless in the acute stage, especially the vegetable astringents. Opium is essential in severe cases, even in young children. Gray powder and Dover's powder in small and repeated doses should be given if there is vomiting. The most efficient remedies are bismuth in full doses with small doses of opium.

In the treatment of chronic constipation in children, as a rule, three devices only seem to be adopted. 1. The administration of more or less active purgatives from time to time, the remedy being repeated as often as the bowels become confined again. 2. The use of enemata, sometimes regularly. 3. The inclusion in the diet of coarse foods and fruit, oatmeal, cabbage, prunes, figs, and the like. If the constipation is chronic, and hence habitual, it cannot be cured by spasmodic efforts; but that is the criticism upon the treatment described. In most cases a drug is required, the constant daily use of some mild laxative being essential to ultimate success. Treatment must be *continuous*. Spasmodic, intermittent over-treatment will fail.

Night-terrors occur usually, but not invariably in delicate neurotic children. The direct cause is usually undue stimulation of the brain, or of the imagination, by exciting stories; unkind treatment; a visit to the zoological garden; or over-pressure at school. By far the most common cause, the author believes, is constipation, often slight but persistent, the stools being hard and dry and usually of light color. The error in the management of these cases is the use of sedative treatment, the constipation being neglected. The neurotic element alone being recognized, bromides are prescribed, often with good effect for the time. The cause being allowed to remain, the relief is, in many instances, temporary.

Among the drugs most heedlessly used at the present day are those which have the property of reducing bodily temperature, such as aconite, antipyrine, and antifebrin. These are powerful drugs, and are too readily resorted to. Pyrexia is a symptom, not the cause or essence of disease. Yet the temptation to reduce the temperature is strong. It must be remembered, however, that in addition to their antipyretic power these drugs have other active properties. They are especially cardiac depressants. In many of the diseases in which they are used the danger lies not in the pyrexia, but in heart-failure. High pyrexia is an element of danger, but is not the sole danger. This is especially true of pneumonia, and the results of decided antipyretic treatment of that disease has not been favorable. Children do not bear such treatment as well as adults. The mere forcing down of temperature by means of antipyretic drugs is futile as a means of curing the disorder which gives rise to the febrile state, and is, besides, often dangerous.

One of the most universal mistakes, although, perhaps, not one of the most serious, is that of relying largely or chiefly upon drugs in the treatment of diseases of defective nutrition. Children are apt to be dosed with cod-liver oil and other drugs without regard to the condition of their digestive organs. A delicate child is drenched with these drugs because it has a poor appetite, is ill-nourished and anæmic. The tongue is coated and the bowels confined, and the child is receiving improper food. Here the chief cause of the anæmia and defective nutrition is the disordered state of the functions of digestion and absorption. A few doses calomel, followed by a tonic with a mild saline laxative and judicious feeding, will do far more good than cod-liver oil, iron, and hypophosphites. They are most valuable drugs in their place, but in these states of disordered function, by intensifying digestive difficulty and impairing appetite, they do more harm than good. In rickets far too much reliance is placed upon drugs to the

exclusion of milk, cream, meat-juice, sunlight and fresh air.

The cruel and useless practice of swabbing out the throat with caustic applications in diphtheria has almost died out, but this method of applying astringents and solvents still survives. After long experience and observation the author unhesitatingly condemns the practice as injurious. Such applications probably do more harm than good, while the terror, excitement, heart-strain, and physical exhaustion are conditions most inimical in a disease tending to death by asthenia.

Other errors in treatment are briefly mentioned, such as oppressive poulticing of the chest in pneumonia; the administration of emetics in diphtheritic croup, which is utterly ineffectual except to exhaust and depress the patient; their frequent repetition in bronchitis and whooping-cough when there is no extreme mucous obstruction of the air-passages to justify it; and the too frequent purging of rickety children.

HYGIENE.

THE ACTION OF WINE UPON PEPSIN AND DIGESTION.

Without dwelling upon the known action of alcohol, which has been well studied by Petit, and upon that of cream of tartar, the novel results arrived at by L. Hugouneng, in some recent researches (*Bull. Soc. Chim.*,) are the following: 1. All wines, without exception, interfere with the action of pepsin, those richest in alcohol, cream of tartar, and coloring matter being most injurious, as it was easy to foresee. 2. Among the elements of natural wines the coloring matters act in concert with the alcohol and the cream of tartar to retard or arrest pepsic indigestion. 3. The acidity of normal wines is unable to excite the action of pepsin; in most cases it does not appear to exist. 4. Among the coloring matters introduced fraudulently into wines, methylene blue, azoflavine, solid blue, and especially magenta, interfere with pepsic digestion. The vegetable colors, black mallows, elderberries, and maki, like œnoline, exert an injurious action. 5. Plastering, by removing a part of the cream of tartar, eliminates an element of natural wines which retards the action of pepsin *in vitro*. Digestion is more rapid in presence of plastered wines, than of natural wines, but the advantage which plastered wines have in this respect does not conceal their other disadvantages.

THE HABIT OF WASHING.

No practice, no custom, however long established, has ever been allowed a permanent right to respect, or even to existence. Sooner or later its turn will come to be weighed in the critic's balance, and its quality will have to be proved. Let us quote, as a recent illustration, the habit of daily bathing, the utility of which has of late, though not for the first time, been seriously questioned. The reasonableness of doubt in such a matter, and under ordinary circumstances, does not, we confess, commend itself to our judgment. Whether the opponents of ablution fear the shock of cold immersion, or whether they dread the cleansing stimulation thus applied to the excreting skin surface, their objection must appear to most persons possessed of ordinary health and vigor to threaten impairment of both by fostering uncleanliness. If, on the other hand, it is the too free application of heat by Turkish and other warm baths which appears objectionable, we will not deny that there is here a possible ground for complaint. Let it not be supposed that we ignore the curative influence or the cleansing property of this method when used with judgment. It has undoubtedly its fitting time and places if rightly applied. It is no less true, however, that experience has often proved the mischievous effects of its misuse —in case, for example, of cardiac weakness or general exhaustion. Cold bathing in like manner is not without its occasional risks. It is not suitable for persons enfeebled from any organic cause, though mere nervous languor is often braced and benefited by it. It has no proper place among the habits of those who are subject to chronic visceral congestions. As regards one advantage derived from bathing—*i. e.*, its cleansing property—there is no reasonable ground for difference of opinion. Man, whether savage or civilized, appears as a rule to have no doubt on the subject. Wherever we find him with water accessible he is a bather. Less practiced by one people than another though it may be, there still is commonly recognizable a constant habit of ablution, and this fact in itself attests at least an almost universal belief in the necessity of ensuring cleanliness by means of washing. Nor can we find reason to doubt the general soundness of this belief. In bathing temperature is of course a chief consideration. For the robust, cold immersion followed by rapid friction is a valuable tonic of nerve, skin, and heart function. For less vigorous constitutions—those, for exam-

ple, which have been tried by disease, and those of young children—the addition of heat up to the temperate point is only judicious. With some persons a warm bath is a daily luxury. Notwithstanding its efficacy as a means of cleanliness, however, this custom is or ought to be discredited by its inevitable action as a nervous depressant, which places it in an unfavorable position compared with the more bracing practice of cold effusion. The benefit derived from bathing, therefore, is likely to assert itself in spite of all adverse criticism, and its mismanagement, which is only too common, should not be suffered to condemn it in the eyes of any judicious and cleanly person.—*Lancet.*

PURIFICATION OF DRINKING WATER.

The burning question of the present age is how to obtain pure drinking water. In reference to this subject I would refer to a paper recently read by Dr. O. Froelich before the Electro Technical Society of Berlin, May, '91, in which he says: "That the attempt to destroy bacteria by means of ozone has been effected with water from Berlin and neighborhood and always with the most complete success. The sterilization test takes place, as is known, in the following manner: A few drops of the water to be tested are placed by means of a sterilized platinum wire on sterilized nutrient gelatine, contained in a sterilized reaction tube closed with a plug of cotton wool. If the water contains bacteria their cultures become visible in the form of opaque grains and tubercles, which continue growing. Even if by such experiments the sterilization of ordinary water is established, it is still doubtful if the less common bacteria, viz., those generating disease—typhus, cholera, anthrax, etc—and their spores are destroyed. The question can only be determined by experts, although there is every indication that it will be solved in a manner favorable to ozone.

"The ozonization of water acts besides in destroying noxious or disgusting substances or transferring them into harmless ones. Sulphuretted hydrogen is separated into sulphuric acid and water, ammonia becomes nitrate or nitrite of ammonia, iron is precipitated as ferric-hydrate, and finally, bacteria which generate decay are probably all killed. We have also good reason to assume that even the worst ordinary water can be made drinkable by means of ozonization. Disinfection by ozone has properties not appertaining to other methods of disinfection. In contra-distinction to sterilization by boiling, ozonization is quicker and cheaper, and as opposed to disinfection by chemical means, such as sulphurous acid and chlorine, etc., it has the greater advantage of leaving no traces behind it in the water. Of course some ozone is absorbed by the water, but the amount is so insignificant that it is not perceptible to the taste. The ozone gas goes through the water, does its work, *i. e.*, kills the bacilli, probably completely, and leaves the water in the same condition in which it entered it.

"How much ozone is taken up by the water in passing through has not yet been established. Shortly, however, larger apparatus will be prepared which may be considered as models of water ozonization, from which can be determined the working power and cost of ozonization for any quantity of water.

"The solid earthy matter held in suspension by water is not affected by ozone; filtration will therefore be a necessity in the ozonization process. The filtering plants heretofore employed have served not only for the removal of the solid matter in suspension, but have also answered the purpose of collecting the greater part of the bacteria and this takes place generally by means of the coating of algæ which is formed on the layer of filtering material. The ozonization of the water, however, answers the purpose of the coating of algæ, but in a much more complete manner. The algæ cannot survive in ozonized water, as has been established by actual experiment, and therefore the laborious upturning of the filtering layer, which has hitherto been the practice in order to prevent the coating of algæ from becoming too thick, is done away with.

"The proper discussion of the ozonization of water can only take place after the cost of ozonization has been more exactly ascertained; nevertheless, so much is thus far apparent, that a fundamental discussion of this question cannot be avoided, particularly in cases in which good drinking water can only be obtained at great cost, bad drinking water, on the other hand, easily obtainable and by ozonization converted into good. The question further arises whether, generally considered, impure water, such as the waste water of towns and factories, cannot be fitly treated by means of ozone. In waste water the bacilli generating decay would in this manner be killed, the ammonia probably converted into nitrate of ammonia and the organic constituents further oxidized

as far as possible."—*Elektrotechnischen Zeitschrift*, 1891, *Heft* 26.

MEDICAL CHEMISTRY.

DETECTION OF BILE-PIGMENT IN FÆCES BY GMELIN'S TEST.

Dr. Rosenthal (*Deutsch. med. Wochenschr.*, August 6th, 1891) investigated the fæces of a number of persons in health and disease, in order to discover under what conditions the presence of unaltered bile could be demonstrated by Gmelin's test, namely, fuming nitric acid. In healthy fæces, or in those resulting from slight diarrhœa, no reaction was ever obtained. If, however, the attack was sufficiently severe for there to be six or more stools in the twenty-four hours, the sixth and subsequent stools almost invariably contained unaltered bile, and Gmelin's test gave rise to the well-known color reaction. In cases, morever, where diarrhœa followed the administration of aperients, if the first stool was delayed, and if several others were passed with a minimum interval of four hours, unaltered bile-pigment was occasionally found in an earlier motion than the sixth. Rosenthal found that it mattered little what pathological cause had led to the diarrhœa. The increased peritalsis—that is, the accelerated transit through the intestinal canal—was the factor which determined the presence of the bile-pigment.—*Brit. Med. Jour.*

A NEW REAGENT FOR ALBUMIN IN URINE.

M. and Ad. Jolles (*Union pharmac.; Nouv. Remêd.*, 1891, No. 7), propose the following method for testing for albumin: 8–10 cc. urine are mixed with an equal volume of concentrated hydrochloric acid and to this mixture are added from a pipette a few drops of a saturated solution of chloride of calcium in such a manner that the liquids will not mix. In presence of even traces of albumin the dividing line will show a distinct white cloudiness.

AUTOMATIC CARBON DIOXIDE REGISTER.

Prof. A. Wolpert, of Nuremburg, has prepared an automatic apparatus for the estima- of the purity of the atmosphere by means of the amount of carbon dioxide contained in the air. This air-tester is so regulated that by a comparison to a standard dial, one is able to determine at once the amount of carbon dioxide in a room, and thus judge if the ventilation is consistent with the standard of health. The great advantage possessed by the use of this machine, from an economic point of view, is the fact that there is no need of changing the air of a room if it be found by the air-tester to be pure, and thus the cost of extra fuel can often be saved.

Printed on the dial are the words *very pure, pure, passable, bad, very bad,* and *altogether bad,* and a table is posted telling the amount of CO_2 these words indicate in 1000 parts of air. On the back of the register is the following scale:

Very pure when less than	0.5	parts CO_2 per 1000 of air.
Pure when from	0.5 to 0.7	" " "
Passable "	0.7 to 1	" " "
Bad "	1 to 2	" " "
Very bad "	2 to 4	" " "
Altogether bad over	4	" " "

The apparatus is arranged as follows: Upon a bracket is placed a low flat vessel, filled with a standard solution of sodium hydrate, colored red with phenol phthalein. To this solution a few drops of oil are added. This prevents the liquid from coming in contact with the carbon dioxide of the air until the proper time. By means of a syphon, which is attached to a cork floating on the liquid, the fluid is dropped automatically into a tube, one-half meter in length. This tube is prepared of a white transparent glass, so as to show off the color of the solution to the best advantage. The syphon is so arranged that at a temperature of 68° F. one drop falls into the tube every two minutes. As the solution falls from the syphon to the tube, the carbon dioxide of the air has an opportunity of coming in contact with the liquid for a constant period of time. If the air is very pure, the coloration will be unaffected. If the air contains CO_2 the color of the standard solution will become lighter from contact of the solution with the air. It would therefore follow that the lighter the solution, the more CO_2 is contained in the air at that time. By reference to an attached color scale, an approximate, but sufficiently accurate, result for ordinary purposes can readily be obtained. The apparatus should not be placed near the fire or in the direct rays of the sun.—*Fortschritte der Krankenpflege.*

NEWS AND MISCELLANY.

THE MEDICAL SOCIETY OF THE STATE OF NEW YORK.

The next meeting of the Medical Society of the State of New York, will be held at Albany, February 2nd, 3rd, and 4th, 1892,

and Dr. Seneca D. Powell, No. 12 West 40th Street, New York; Dr. James D. Spencer, of Watertown, and Dr. Franklin Townsend, No. 2, Park Place, Albany, have been appointed the business committee. Any communications regarding papers or any matter pertaining to the business of the Society which should properly come before the business committee, should be addressed to Dr. Seneca D. Powell, 12 West Fortieth Street, New York City.

A. Walter Suiter, President.
F. C. Curtis, Secretary.

THE PREDICTED RETURN OF RABIES AND HYDROPHOBIA.

It will be remembered that only a short time ago congratulations were freely expressed on the fact that London was practically free from rabies, in consequence of the beneficent action of the muzzling regulations, but when Mr. Chaplin yielded to the pressure put upon him by some of his political friends, and substituted for the very efficient muzzle the oft-exploded plan of a collar and inscribed address, we pointed out that, as the restrictive regulation was only applied to a part of the country and for an insufficient period, the disease would inevitably reappear and human beings die from this most painful and yet most easily prevented of diseases. Our forecast is, unfortunately, only too truly justified by facts. Isolated cases of rabies appeared within a couple of months of the cessation of the muzzling regulation, and by this time now we are of course beginning to receive intelligence of human beings falling victims in their turn. Last week an inquest was held at St. Thomas' Hospital on a commercial traveler who had been previously bitten by a dog, and a verdict was returned of "Death from hydrophobia." A couple of months ago another case occurred at Ealing in which there was no doubt that the patient died of hydrophobia, a verdict being returned to that effect, although there was considerable question as to the identity of the dog which had conveyed the infection; and we have heard of another case since. It is perfectly clear that the usual autumnal increase of the disease is now notifying itself as the commencement of a fresh epidemic. We hope very much that the Board of Agriculture will take this lesson to heart and that political considerations will not be allowed to intervene again in matters of public health. Mr. Chaplin surely will not prefer the false statements of a few bigoted sentimentalists to the statements of fact offered to him by his scientific advisers.—*Brit. Med. Jour.*

INDIAN OPIUM IN MEDICINE.

At the recent British Pharmaceutical Conference Mr. E. M. Holmes read a paper on "The Opium Used in Medicine," in which it is stated that Indian opium is not used in England. In one recent year only two cases of Malwa opium appeared to have been imported into this country, and it was unknown to retail chemists. He thought that there was no reason why India should not take the place of Turkey in supplying Great Britain and her colonies with the drug. It was true that the Indian opium differed materially from Turkey opium, as, from the process of manufacture at present employed, it contained 30 per cent. of water, was apt to ferment, and contained less morphia than Turkey opium. But he saw no reason why, if the necessity arose, some improvement could not be effected in the process of manufacture. The poppy grown in the higher altitudes in India yielded opium containing 50 per cent. more morphia than that gathered in the plains. He then proceeded to adduce reasons for anticipating that it may be beneficial for the Indian Government to look to Great Britain as an outlet for the opium produce, and these are: The Chinese are now cultivating the poppy to a large extent, with the result that the opium exports of India are on the decrease; as the interior of Africa is opened up a large supply of the drug will be required by the inhabitants of that country; and should Turkey become the seat of a European war our supplies from that country will fail, and then it would be that India might step in. He also referred to the manufacture of opium in Australia, and gave it as his opinion that opium could be manufactured in India, under proper English supervision, which would compete with the Turkey variety. Specimens of Indian opium were exhibited.—After *Pharm. Journ.*

JOSH BILLINGS ON DOCTORS.

Doktors are not all quaks; you hav got wrong noshuns about this. Doktors, lawyers, and ministers have a hard row to ho; they hav to deal with kredulity, knavery and fears ov the people—three ov the most difficult traits in human natur tew handle. If i was a doktor and understood my bizzness, i should doctor my pashunts, and let the disease take care ov itself. More folks are cured this way than enny other.—*Med. Times.*

TWO RECENT CONTRIBUTIONS TO THE SUBJECT OF PRE-HISTORIC SYPHILIS.

In an exhaustive discussion of the question of the existence of syphilis among the inhabitants of America before the discovery by Columbus, Hyde, after an elaborate historical review, revealing an epidemic in Spain, just about the time of Columbus's sailing, describes many instances of the discovery of bones bearing what has been supposed to be unmistakable evidence of syphilitic lesions. One element, however, he says, he has been wholly unable to establish beyond a peradventure, namely, that the bones, which he examined either directly or from photographs, were genuinely pre-historic; and, moreover, he does not think that any means exist of proving that the lesions found on the bones were prodnced by syphilis and nothing else but syphilis. Dr. Hyde says that until we are able to prove beyond a doubt that the burial places of these bones have never been interfered with since pre-Columbian times, we cannot be absolutely sure that syphilis existed among the Indians of those early days.

Contemporaneous with this article in this country, Proksch, writes about the probable existence of syphilis among the old Egyptians. In studying a papyrus containing instructions for the management of different manifestations of a disease known to the old Egyptians as *uxedu* (so spelt in the original article), Proksch traces out syphilis. The papyrus gives the treatment for *uxedu* in the anus, in suppurating wounds, in the mouth, in the eyes, in the bones, in tumors of the head, in the body, in pustules, etc., herein giving an almost complete history of the various situations in which syphilis may manifest itself. The author concludes that *uxedu* of the old Egyptians is our syphilis. —*Boston Med. Surg. Jour.*

A MAN BURIED ALIVE.

A curious fact is reported as having occurred at Saint Crépin, in the canton of Saint Sernin, near Rodez. In carrying a man supposed to be dead, from the church to the cemetery the pall-bearers, four young men, thought that they perceived a movement inside the coffin. The ceremony being finished they compared observations, and all agreed as to their sensations. Communicating their suspicions to the clergyman the coffin was ordered to be opened, and it was found that the man had, in fact, moved. The hands, which had been crossed upon the breast, were raised in front of the eyes. The man was taken from the coffin; he was addressed, but made no reply. A stimulant was administered and absorbed. He was transported to his home and means used to restore him to life. The following day he was living, looked about him, drank, and spoke a few words, but was extremely weak.—*Le Progrès Médical.*

THE ANTIQUITY OF RHEUMATISM.

A very valuable find of skeletons has been made in Egypt by Mr. Flinders Petrie, who has recently opened a number of tombs previously intact at Medum, belonging to the beginning of the fourth dynasty. This is the earliest known date of Egyptian remains, and that to which the Egyptians ascribe themselves. The skeletons are well preserved, but tender and friable. Some of them bear unmistabable evidence of rheumatic changes, and consequently indicate that at that very remote period man was subject to and suffered from this, as is now shown from its antiquity, venerable disease. No ornaments or objects of art, except occasionally some rough pottery or a wooden headrest, were found with these remains. The greater number were interred in a contracted position with the knees drawn up to the breast, even when the tomb was long enough to allow burial in the extended position, the body placed on the left side, wrapped in linen cloth, the head always to the north and the face to the east. A few, however, apparently the bodies of the highest class or race, were interred in the extended position along with vases of stone or pottery and headrests. At this period there is no trace of mummification. The essential difference in the mode of interment seems to point to difference of race, and it is probably that the contracted burials are those of the prehistoric race of Egypt, while the dynastic race were interred with the body extended. It is extremely interesting to find the these contracted burials common at so early a date in Egypt, as a similar mode was adopted by the earliest inhabitants of Great Britain. Mr. Petrie has brought the skeletons to England, and deposited them at the College of Surgeons, where they are being treated so as to strengthen them and render them available for the anatomical investigation which Mr. Petrie intends to have made in order to determine, if possible, their ethnographical affinities. When this is done we shall doubtless also have a full description of any pathological condition which may be present.—*Brit. Med. Jour.*

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Clinical Lecture.

SCOPE OF ORTHOPEDICS—THE FORMS OF CLUB-FOOT—TENOTOMY.*

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SCOPE OF ORTHOPEDICS.

Gentlemen:—By way of introduction I desire to say a few words in reference to the word orthopedic. Unless we understand thoroughly what is embraced in this term, we cannot entertain a clear idea of the subject we have before us. The first part of the word is derived from the Greek *Orthos*, straight, or preferably, to make straight. This is plain thus far, but unfortunately there is a confusion in the minds of many as to the derivation of the final portion of the word. It is supposed by some to be derived from the Latin, *pes*, a foot, thus limiting the meaning of the word to the narrow scope of making a deformed foot straight. The correct derivation is to take it from the Greek, *pais*, a child, therefore making the word mean literally "to make straight a child," presuming that the child is deformed.

Now let us think for a moment of those diseases which especially give rise to deformity in children, namely rickets, tuberculosis, paralysis, etc. Were we to confine orthopedics simply to the correcting of deformity already existing in children, we would limit its usefulness to a very narrow scope. Many of the deformities of children require orthopedic treatment during adult life. Therefore, orthopedists define orthopedics in the broadest sense thus: Orthopedic surgery is that branch of medicine which has for its object the prevention and correction of chronic and progressive bodily deformities. Thus enters into the subject the important feature of rational medicine, the prevention of disease, and as well the prevention of deformity. This necessitates a familiarity with those conditions which will produce deformity, and in our clinics we will from time to time give our attention to this part of the subject. There are numerous deformities that although congenital are not classed as orthopedic cases. Cleft palate for example is a congenital deformity, but it is a condition which is not a progressive deformity, and can not be corrected or prevented by other than surgical measures. We must remember that the definition embraces *progressive* deformities. It is the prevention of progress as well as the cure of disease that orthopedic surgery has for its object. It is within the knowledge of your preceptors that patients suffering with diseases of the eyes were sent to the optician by their physicians to have their optical defects remedied. This practice was continued until the oculists occupied the field, recognizing the injury that was being done to the patients, by men without any medical knowledge whatever, and now the oculist prescribes and the optician makes the necessary glasses. What would you think of a doctor who would send to an instrument maker a patient with a fractured limb with instructions to please apply a proper splint for this broken bone; or of a physician who would send a fever patient to a pharmacist with the request that he give him some drug to allay his fever? You say this would be absurd. Yet this has been the practice with orthopedic cases which have been sent to mechanicians for the purpose of having some form of brace applied. In many instances the braces so procured concealed rather than corrected the deformity. The mechanician has been driven to occupying the false position of in reality practicing medicine without a science, because of the ignorance of physicians of that most important subject mechanico-therapeutics. The mechanician is thoroughly skilful in

*Two lectures; the second to appear in the next issue of the Reporter.

the manufacture, adaptation and fitting of braces and orthopedic appliances, but his training has not been that of a physician and he is not therefore fitted to prescribe an appliance for a disease any more than the optician or the apothecary.

The entire absence of knowledge on his part, of pathology, etiology, etc., renders him liable to apply braces for cosmetic purposes only, in other words to correct the appearance of a deformity rather than to apply mechanico-therapy to the correction or prevention of the deformity or the disease or condition tending to produce a deformity.

I consider it as important that you should have a knowledge of the principles of mechanics, as that you should know what drugs to prescribe. I would urge upon you a strict, careful study of progressive deformities, for, in order that you succeed in treatment of orthopedic cases, it is necessary that you start at the initial stage of the management of the various conditions, namely, the *prevention* of the trouble. I feel that it will be impossible for me in this course of lectures to follow out a systematic course, beginning with one subject and following it to the end, simply because the patients are often sent to us in the stage of their disease when it is important for you to see them at once. If I withheld the case until the appropriate time had arrived in the course of lectures, I should deprive you of seeing the case when most instructive, and would cause you to lose much valuable information. To show you that orthopedic surgery treats not only of deformed feet, but of other equally important subjects, I shall begin with the feet and draw you away gradually to the other portions of the body. A strong, firm foundation is necessary upon which to build any superstructure, and therefore we begin with the feet. Let us see how we can take a club-foot, and by mechanical means combined with surgery and therapeutical measures correct the condition. There are various kinds of deformed feet.

FORMS OF CLUB-FOOT.

First, we have the *Equinus*, derived from the Latin *Equis*, a horse, and indicating that in this form the patient walked like a horse. The foot is so deformed, that it is extended in a more or less straight line, the patient walking on the tip of its toes or on the ends of the metatarsus. Now suppose the patient's foot was in the reverse condition, the toes up and heel down, then the patient walks upon the os calcis. Therefore this form of club-foot is called *calcaneum*. Although these two varieties are among the rarer forms of the disease, still they exist and must be recognized. Now we have mentioned the bending forward and back, let us consider the bending to either side. If the patient walks on the outside of the foot, the condition is called *varus*. In this condition the foot is turned in. The reverse of this is *valgus*, that is the foot is turned outwards and the patient walks on the inner surface of the foot. The condition produced in the Chinese woman's foot has taught us another variety which we occasionally see produced, not by fashion, as in the case of the Chinese ladies but by disease. This form is the condition in which the normal arch of the foot is increased, and the anterior and posterior pillars of the arch are brought closer together, and there results a cavity of greater magnitude than normal. This is called *cavus*. If we have an increase of the arch, it would be natural to suppose that there may be also a diminution of the arch. If the arch gives away we have a condition of flattening, and this is called *plantaris* or flat-foot. As we proceed in our work, and bring cases before you, you will see that there is no such thing as a simple straightforward disease or deformity with no variations. Some of the names I have given you designate conditions which are known by other names, and often they are combined to describe mixed cases, but I will avoid confusing you by deferring reference to these mixed varieties until I show you cases.

This morning I purpose starting with the cases we have on hand, and I will show you this girl who came to us recently, presenting *valgus* form of club-foot. I must ask you to form in your own minds a conception of what a normal foot is, and I may astonish you when I say that I doubt if there is anything of the kind in this room to-day, as the shoemaker has deformed all of the feet here. In this girl the foot is everted, and the patient walks upon its inner surface. In this second case you see an exaggeration of this same condition. You will notice how the great toe is infringed upon and the other toes pushed out. In contra-distinction to these two cases of *valgus*, the treatment of which I will postpone to another time, I wish to show you another variety of club-foot occurring in an infant aged two months. You will observe here a congenital club-foot of the *varus* variety. If this patient could walk, it would be upon the outside of the foot. There is something holding this foot in this position which prevents a return to the normal posture. There is here a want of correlation of muscular force. If one side of the muscles

of a foot is paralyzed or so placed that the muscles cannot act, there will be a resultant deformity from a want of correlation of muscular action. If a man while rowing makes use of one oar more than of the other, the boat is turned. Just so it is in this condition. Now if we can correct the defect in the muscular action, the deformity will be overcome, as you see has been done in this boy, who was born with *varus* of one side, but who is now approaching a normal condition. In this baby's case, on whom we will operate to-day, the difficulty is that certain muscles are tight and contracted while others are relaxed. The anterior tibial is contracted, and I find its tendon firm and unyielding as soon as I endeavor to correct the foot. This if left alone will counteract all efforts to overcome the deformity and the bones will become ossified in their deformed positions. In addition the tendo achilles feels like a taunt steel wire, and it is adding to the defect. Bear in mind that the operation is not to be done simply to correct the deformity but to put the muscles into a proper relationship, and to place the joints in a normal mechanical position, so as to favor the development of a natural condition of the foot. This second baby is three months old and has double *varus*. The earlier the patient is placed under manipulation and treatment the better the result. The longer we wait, the more thoroughly the bones of the foot become ossified, and consequently the more difficult is the correction. I believe that the first day is none to early to begin manipulative and restrictive treatment of a congenital club-foot, and further, that by beginning thus early, resort to surgical proceedings is less frequently necessary.

TENOTOMY.

The operation of tenotomy for the correction of club-foot is a comparatively modern procedure. It was performed, I believe for the first time, by Sartorius in 1812.

Delpech in 1816, divided the tendo achilles by an open wound, but it is recorded that the wound did not heal for three months.

It remained for Louis Stromeyer to perform the operation subcutaneously, which he did for the first time in 1831.

I know of no better words to describe subcutaneous tenotomy than by saying it is made by a small hole in the skin, the better to conceal the unknown and often extensive amount of destruction beneath.

It is performed by a sharp pointed tenotome perforating the skin and opening a way to the tendon; upon withdrawal a blunt pointed tenotome is introduced and the tendon divided by a sawing motion. No attempt should be made to use force, for the tenotomes are entirely too delicate to permit of it. I have seen tenotomes broken many times and great difficulty was experienced in finding the broken ends.

The various methods of procedure recommended by advocates of each method are first, the simple transverse incision in which the tendon is divided at a right angle to its length. Transversely oblique incisions are made by drawing the knife from below upwards or from above downwards through the tendon as it is being cut.

It may be divided longitudinally obliquely by entering the tenotome at a point one inch and a half to two inches above the os calcis and passing the knife under the skin to the distal insertion of the tendo achilles. The incision begins on the side opposite to that of the skin puncture and in this oblique position is gradually withdrawn, cutting the tendon as it passes.

Then a tendon may be cut from within outwards or from without inwards. I prefer the former, for then you have the movement under the skin to guide the progress of the knife.

While I frequently use the subcutaneous method you will, I think, perceive from the definition I have given, that I do not favor it, on account of the uncertainty which necessarily must exist as to the extent of the severance of tissues other than of the tendon.

Modern aseptic methods has made it possible to resort to procedures that are accurate in the incision as well as in the results obtained, and now open wound tenotomy is freely and safely performed. Professor W. W. Keen has originated an accurate method of tenotomy through an open wound, which I have found of the greatest service. It consists of the longitudinal slitting of a tendon through its middle, and at the point of the origin of the incision to transversely divide one-half of the tendon and at the other end of the cut to divide the other half. The divided ends being retracted to the required extent, the portions in contact are sutured and thus held in exact position, and the skin wound stitched.

I invariably resort to the requisite mechanical appliances to over-correct after tenotomy, so that plasma which, is deposited, may unite the divided ends of the tendon and avoid the necessity of after stretching, which tends to attenuate the newly formed tendon.

In the correction of a club-foot, divide by clean incision at one sitting all soft structures that restrict the complete correction, rather than depend upon the possibility of their yielding or tearing upon the application of force. If the case before us requires it I shall not hesitate to freely divide the anterior tibial, plantar fascia, all the tendons of the flexors of the toes and the tendo achilles, but I invariably reserve the latter for the last, to increase the hold upon the foot at the time of correction.

COMMUNICATIONS.

A NEW APPARATUS FOR DETECTING AND MEASURING THE ANOMALIES OF THE OCULAR MUSCLES.*

BY S. D. RISLEY, M. D.,

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The renewed interest which of late years has been awakened in the study of the ocular balance has served to demonstrate the necessity for some form of apparatus which would facilitate the work of the surgeon, and at the same time secure trustworthy measurements of the relative strength of the ocular muscles. The use of the series of prisms ordinarily found in our sets of test-glasses, was notoriously tedious, fatiguing both to patient and surgeon, and withal variable in results, so that the temptation to avoid a wearisome task constantly presented itself, since at the end there was placed but little confidence in the result.

It is not my purpose to discuss here the anomalies of the ocular muscles, but to describe briefly an instrument devised to meet the indications suggested above. In passing it may be said that not infrequently muscular defects parade themselves in a manner to deceive the observer, as to the real muscles at fault, or the defect may be wholly or in part concealed, but nevertheless the cause of ocular disturbance or reflected symptoms. To detect these latent disorders, or to unravel successfully the vagrant and confusing movements of the eyes, it is helpful to have the patient as far as possible in a position of general muscular rest, and the eyes placed under conditions which remove the ordinary inducements to binocular vision. It is furthermore desireable that these conditions shall be simple and readily understood, since for the most part our patients are not trained to habits of accurate observation. Then, too, the persons suffering from these anomalies are apt to be "nervous," are afflicted with headache, particularly with occipital pain, which is aggravated by any protracted examination. The occular muscles become irritable under the effort to measure their relative strength, so that the more persistent the trial, the less trustworthy are the results reached. Nothing could be more annoying to the eyes of an already suffering patient, than the heavy trial-frame resting upon the nose, and the placing and replacing in wearisome successions of the cumbersome prisms of the test-set. To avoid these annoyances and at the same time meet the requirements for a rapid and careful determination of any existing anomaly I have had constructed, by John L. Borsch and Company, of Philadelphia, the apparatus here described. With various modifications I have used it daily for more than three years, and now present it in the hope that others may find it an additional aid in the daily routine of office work.

At the meeting of the American Ophthalmological Society, in July, 1889, I presented a convenient form of the Cretes rotary prism, a description of which will be found in the transactions for that year. The wood cut of this instrument is here reproduced, Fig. I. The instrument now described is a fixed form of apparatus for the accurate use of the rotary prism and certain other accessories, *e. g.* the correcting-glasses for any existing defect of refraction, the stenoparic slit, the Maddox double prism and rod. The accompanying wood-cut, Fig. II, exhibits its details in a manner which will obviate any necessity for lengthy description. The essential part of the apparatus is the *holder* which can be mounted upon a stand designed to rest upon a table or desk—or as in the cut upon a floor-stand which is placed by the side of the chair occupied by the patient. At the top of this stand there

Fig. I.

* Read before the American Opthalmological Society at Washington, D. C., September, 1891.

is placed a strong horizontal arm, which is carried to the front of the patient and supports a second upright shaft, which moves up and down freely but is fastened at any desired height by a binding screw. On this shaft is placed a chin rest, N. and at its top

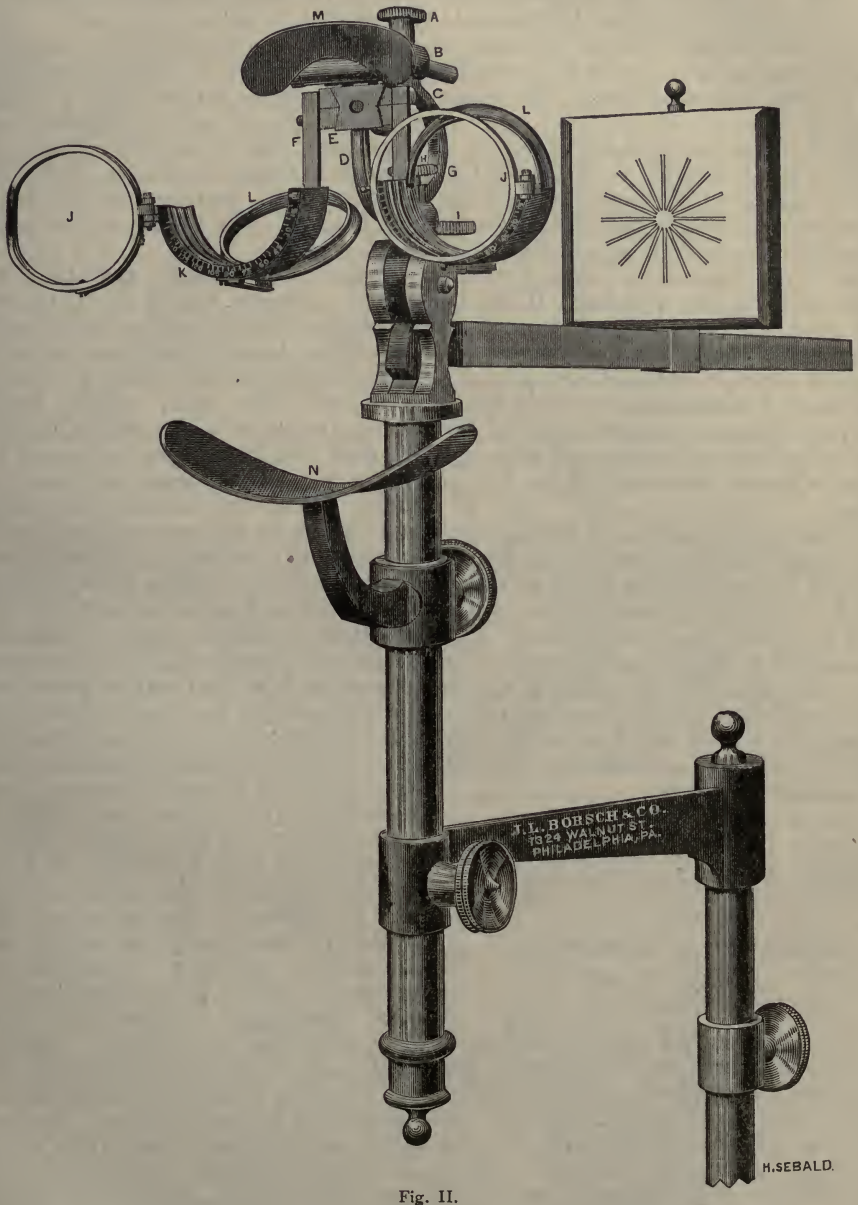

Fig. II.

the holders K. and accessories are supported. L. L. are a pair of rings or cells for the reception of the rotary prisms. These are hung on a spring hinge which permits them to be turned forward and downward below the line of vision, so that the prisms are out of the way when not in use, but are readily turned upward into place when desired. A rotary prism should be placed on each side for rapid working, the zero mark at 180° on one side and at 90° on the other. On the posterior surface of the holders, K. is seen the ring J. J. This is hung on a spring-hinge and on the left side is represented as turned outward, out of the line of vision, but *in situ* on the right side. These are designed for the reception of the Maddox double prism or red, each of which are

mounted in a cell which accurately fits these rings, and may be turned to any desired position, being checked at 90° and 180° by a stop-spring. These may be retained permanently in place, but are readily removed and replaced when desired, by other cells containing a stenoparic slit, a blank metal disk for excluding one eye, and a third with a central opening 2½ mm. in diameter to act as a diaphragm in correcting certain cases of high refractive error with widely dilated pupils.

M, is a brow-rest, adjusted by means of the screw A. Just below the border of this is seen a spirit level without which the triple images produced in using the Maddox double prism or the bar of light, as produced by the rod—are not easily maintained in a strictly vertical or horizontal position. When inclined they are confusing to the patient. The bar, with carrier on it containing the astigmatic chart is designed for work at a near point. The carrier moves freely to and fro on the bar and carries a series of test cards. The bar can be removed when not in use or turned down out of the line of vision.

The rotary prisms when in place as suggested above furnish a most ready and rapid method of determining the power of adduction, abduction and sursumduction at 6 m. or .50 m. At 6 m. a small point of light is used, while at the near point a small word of D = .50 is placed in the centre of a white card. In all these respects, however, the instrument lends itself to the preferred methods of the observer as readily as does his test set and trial frames.

SARCOMA OF THE DORSO-SCAPULAR REGION; OPERATION; RECOVERY.*

BY GEORGE N. LOWE, M. D.,

RANDALL, KANSAS.

In the formation of a sarcoma we have a neoplasm pathologically heteroplastic, predominating constructively over the type of the connective tissues in which, however, the cellular constituents predominate over the intercellular substance. In this respect they resemble the immature connective tissues; so that the comparison of sarcoma to embryonic formative tissue is perfectly apt.

*Read before the Mississippi Valley Medical Association, October 14, 1891, in St. Louis, Mo.

Sarcoma originates invariably in a structure belonging to the connective tissue group, *i. e.*, in formed or unformed fibrous tissue, in cartilaginous, bony, mucus, lymphoid, neuroglia, or adipose tissues. The transformation of these into tumor tissue is effected by the growth and multiplication of the constituent cells.

Of these there are several varieties, depending upon the size and configuration of the cells, and the nature of the intercellular substance. They include what have generally been known as fibro-plastic, fibro-nucleated, recurrent fibroid, and myeloid tumors. Many growths formerly described as "cancers" also belong to this class of new formations.

Structure.—Sarcomata may thus be defined as tumors consisting of connective tissue which throughout its growth more or less retains the embryonic type, in so far at least that cells predominate over intercellular substance. The cells, which constitute nearly the whole of the growth, consist for the most part of masses of nucleated protoplasm, and rarely possess a limiting membrane. They vary much in size and form, and though in a tumor one form predominates, all may generally be found by search (Cornil-Ranvier). Often the different forms are much mixed in the same growth. There are three principal varieties—the round, fusiform, and myeloid cells. The case now in question is of the round or giant variety.

Case.—Angle E., aged 18 years, American by birth, a farmer of healthy parents, no history of tuberculosis, carcinoma, or sarcoma so far as I could ascertain of either parentage. In the latter part of May, 1889, while lifting a heavy weight, using his language, he "felt something kind of give way on the left shoulder blade." No swelling, no redness of the parts could be detected; yet there was a dull aching pain at the seat of the lesion. Sometimes it apparently subsided, but occasionally the patient experienced a rather sharp darting pain at the site of the injury. At first the pains were at long intervals, from four to five days or a week; as time advanced they returned at shorter intervals. During the winter of 1889 and 1890, while attending school he was struck with the fist of a comrade two or three times while boxing, in the same region of the first lesion. He also stated that later he was struck with a hard ball with great force at the same region. Those contusions increased the suffering of the patient; yet there was none of those

blows sufficiently severe to produce a discoloration or swelling.

About the middle of February, 1890, the obtuse pains were deep-seated and almost constant; the acute sharp pains recurring at shorter intervals. At this time his condition was such that he consulted a physician of ability. As there was no discoloration, heat, swelling, or marks of any lesion, although there was some tenderness (deep-seated) on pressure; as there was nothing visible, his physician, not suspecting anything serious or malignant, diagnosed rheumatism and prescribed accordingly without benefit. About the first of March, 1890, the young man discovered a slight enlargement, seemingly solid and deep-seated, on the scapula about two inches posterior to the scapular notch, on and above the spine of the scapula. This neoplasm assumed a slow but steady growth, which, on pressure, produced a deep, sickening pain. No heat or redness over the parts affected.

On the second day of April, 1890, the young man and his father came to my office in search of relief, and gave me the above history of the case.

On examination I found a solid growth, deep-seated on the dorsum of the left scapula, but was not attached to the periosteum, measuring two inches in diameter, producing a fainting, sickening pain on pressure. I diagnosed sarcoma, and stated the facts in the case to the father and son, and told them that the only means for relief and cure was an immediate operation, removing a sufficient amount of tissue beyond the cell proliferation. They persisted in not having an operation done at this early stage until other means failed, and begged me to use my best judgment in directing some other course of treatment. I applied iodine injected with glycerine of various strengths, without reaction, and with iodide of potassium internally, and would have injected the virus of erysipelas for reaction if I could have obtained it. The only benefit obtained from the injection of the tr. iodine with glycerine was that it seemed to retard the growth. As there was no improvement up to July, the patient passed from under my observation to a new field of treatment. I insisted upon an operation. I did not see the patient again until about the middle of February, 1891, at which time he returned with a double neoplasm about the size of an ordinary cricket-ball, which he stated had grown rapidly for the past two months. As before, I pressed the matter of operation, but he refused. He begged for the iodine treatment again. I told him and his father that it was perfectly useless to waste time, as it would shortly terminate the boy's life. On the second day of April, 1891, the tumor measured 11½ inches in length by 6½ inches in width, perfectly adherent to the dorsum of the scapula, extending upward across the upper part of the dorsal and cervical vertebræ, and also extending downwards below the scapula, with an elevation above the surrounding surface about three inches. On the second day of April, I presented the young man to the members of the Republican Valley Medical Association in session at Concordia, Kansas, at that time. The majority of members present corroborated my diagnosis. The formidability of the growth now became a serious matter. About the 15th of April the young man and his parents consented to an operation, and I prepared the patient for it. On the 23d I operated, being assisted by Drs. B. T. Trublood, of Grand Island, Nebraska, and G. B. Morse, of Formosa, Kansas. At this time the growth measured 12 inches vertically and eight inches transversely. Palpation indicated a firmly adherent neoplasm. Fifteen minutes previous to the administration of the anæsthetic, I gave the patient gr. ⅓ morphia sulph. hypodermatically; brandy ℥jss. Dr. Morse administered the anæsthetic. Patient was ready for operation in fifteen minutes. Every antiseptic precaution was taken. I made the incision in the line of the vertex of the growth, commencing one inch from the summit over the cervical vertebræ down to one inch of the lower portion of the tumor. The growth was beneath the trapezius muscle. With a dissector I loosened the trapezius on each side of the tumor, and it was held back by retractors while I enucleated the entire mass, which was bound down by strong fibrous bands. The whole growth was deeply embedded on the scapula, the thoracic wall, the fourth, fifth, sixth and seventh cervical, and the first, second, third, fourth, fifth and sixth dorsal vertebræ. It was attached to the spine of the scapula, the sixth and seventh cervical, and the first, second and third dorsal vertebræ. The sixth and seventh cervical spines were removed with bone shears, the remainder of the spinous vertebræ being liberated with curved shears, also the spine of scapula. The wound was thoroughly irrigated with 1–5000 bichloride of mercury, then thoroughly dusted with iodoform, packed with 1½ yards of borated gauze, a drainage tube inserted, wound

closed with deep and superficial sutures, dressed with borated cotton and gauze, all completed in one hour, this at noon. The patient rallied nicely with but slight shock. Six P. M., temperature 100°; pulse 72, strong and full; respiration normal; patient complained of some pain. I gave morphia sulph. gr. ⅛, quinine sulph. gr. iij, brandy ℥ss in a little syrup and water, which soon gave the patient rest until my next visit, April 24th, 8 A. M., when I found his condition good, with temperature 100½°; pulse 74; respiration 19. He had taken milk and soup in sufficient quantity and said he felt all right. I left morph. sulph. gr. ⅛; quinine sulph. gr. iij; brandy to be administered *pro re nata*. At 10 A. M. the patient complained of pain, when the morphia, quinine and brandy were given as directed. He rested well the remainder of the day. I saw him at 7 P. M., when the temperature was 100.01°; pulse 72; respiration normal. He stated he was feeling quite comfortable. He had taken milk and soup in sufficient quantity. April 25th, 9 A. M., temperature 100°; pulse 70; respiration normal. Had rested quite well during my absence by taking morph. sulph., quinine sulph. and brandy at 2 P. M., April 26th. All conditions good. 6.30 P. M., condition the same as in the morning. April 27th, 10 A. M., temperature 100°; pulse 70; respiration normal. Had rested well during the previous night by taking quinine sulph., morphia sulp. and brandy at midnight. At 7 P. M. I found his condition unchanged.

April 28th, A. M., Dr. Morse present; temperature 99¾°; pulse 70; respiration normal; had rested well the past night; condition good. As drainage had been profuse, I redressed the wound, first removing the gauze packing, then irrigating the wound thoroughly with carbolized water, reinserting ¾ yard borated gauze, and dressed the wound as before.

April 29th, 6 P. M., condition remaining good; temperature 99½°; pulse and respiration normal. April 30th, 10 A. M., temperature, pulse and respiration normal. Had rested well since my last visit; appetite increasing; asked for a more solid diet than milk and soup, which was granted. May 1st, temperature, pulse and respiration normal. I removed all packing and sutures, re-irrigated wound as before; external wound had healed by first intention, and things pointed to an early convalescence. I redressed the wound as before. From this time on the patient improved rapidly. On the 14th day (May 9th) after the operation, he came a distance of 3½ miles to my office for a redressing of his wound. At this dressing I found that the wound had completely healed internally as well as externally without any apparent disfiguration in the region operated upon. At this dressing I discharged the patient.

From this time on he gained strength rapidly, and was able to be in the fields ploughing corn in five weeks after the operation. From this on he enjoyed excellent health up until about the first of August, 1891. At about this time he noticed a small elevation or nodule on the left side of his neck, just posterior to the sterno-cleido-mastoideus muscle. Although I had made positive injunctions to the patient and his parents that if they discovered a return of the growth to report to me immediately, they failed to do so up to the last of August, when I found the growth about the size of an ordinary goose egg deeply embedded in the left side of the neck, beneath and posterior to the sterno-cleido-mastoideus muscle, with the indications of other regions being affected. The weather was extremely hot, and his general outlook was unfavorable. He had now consigned himself to a faith cure quack, whom he was persuaded to go and see, who induced him to believe without a doubt that she could cure him by words. His parents entertained the same belief, and they refused to have another operation done until the faith cure was exhausted, alleging that they could not pay for an operation every few months.

September 20th, the young man again came to my office, having now a growth on the left side of his neck, which measured 8 inches vertically and transversely, deeply embedded beneath the sterno-cleido-mastoideus muscle and clavicle—in fact, the entire field across his back was involved, heaving up *en masse* with the neoplasm; also two nodules on his breast. At this time they fully realized his sad condition, and wanted quieting powders so that he could rest. They also wanted me to intercede for him that he might go to some institution for treatment. I sent him to an institution at Topeka, Kansas, on the 20th of September, 1891. He is still there. As the prognosis is unfavorable, the surgeons in charge refused to operate, but they are resorting to injections into the tumor growth in the hope that they will break down the cell proliferations and thus prolong life.

My object in this paper is to show the necessity:

1. Of an early operation in all cases of

malignant growth.

2. That some species of sarcoma are more rapid and destructive in their course than carcinoma, especially the spindle and giant-celled variety.

3. The necessity of having a law to enforce patients so afflicted as soon as a correct diagnosis can be made, to an early operation, thereby preventing great suffering and prolonging life.

4. That in the case of a sarcoma which has grown to enormous extent, infiltrating the surrounding tissues to any considerable extent from the main growth with cell proliferation, an operation is almost useless as regards a permanent cure.

DIET AND THERAPY OF TYPHOID FEVER.*

BY CHARLES F. J. LEHLBACH, M. D.,

NEWARK, N. J.

It cannot be denied that, far from unanimity of professional opinion, regarding the dietary and therapeutic treatment of typhoid fever, there has rather been a tendency during the last ten or fifteen years to wider divergence in the choice of agents to meet supposed indications. The causes which have led to this unsettling of theory and practice are mainly due to: first, the close, and more systematic observation of the clinical history of the disease by means of exact thermometry; and, second, the discovery of its infectious germs, their origin, growth and relation to previously known pathological lesions and complications; third, to the advance of organic and synthetic chemistry, followed by many additions to the list of dietic and remedial agents. With these new armaments, the thermometer, the microscope, the culture tube and the chemist's apparatus, the warfare against disease has entered into a new stage of experimentation. It is no reproach to physicians that in this almost wilderness of newly established facts, they should often strike out in seemingly opposite paths, apparently falling into contradictions and irreconciliable extremes. Sooner or later these seemingly opposite paths will meet, the apparent contradictions will be reconciled, the extremes will be welded together by the strong band of experimentally established truth.

It is not intended, were it possible, in this paper, to enter into a systematic criticism of the various dietetic and therapeutic modes of treatment of typhoid fever, but to point out a few fundamental facts which should be borne in mind, else we go adrift without rudder or compass.

The first point to be emphasized is the fact that typhoid fever is a wasting disease, that from the first day of its incursion to the last day of pyrexia there is a loss of weight of the body. This waste occurs more or less in every case and probably under many different modes of treatment alike. The curve of weight-decrease during typhoid fever has been made the subject of careful examination in numerous cases by Prof. Ernst Kohlschütter (Volkmann's *Samlung. Klin. Vortr.* No. 203—1887 Schmidt's *Jahrbücher.*) and it has been found that this curve takes an exactly uniform course. It sinks, at first rapidly, then, from week to week slower until complete freedom from fever. After complete apyrexia has occurred, it begins to rise. The fever alone therefore seems to be the cause of the decrease in weight, not as might be supposed, and has indeed been often assumed, the diminished supply of food. Probably all organs and tissues are equally involved according to Kohlschütter in the decrease of weight. Increase of weight, after apyrexia, follows more slowly, but also according to fixed rule.

Based upon some unique spectroscopic investigations, Henocque and G. Bandouin *Gaz. Hebdom,* 1888, 37, 38, 39), have attempted to prove that the activity of reduction of oxyhæmaglobin, *i. e.,* the energy of oxygen—waste in the tissues stand in opposite relation to the height of fever temperature. While it is certain that no particular dietetic or therapeutic method of treatment can prevent this waste entirely, it is only logical to conclude that this waste will be lessened in proportion to the reduction of the fever.

Undoubtedly basing himself upon the former consideration, we have been advised by Dr. R. F. Licorrish (*Medical Record,* March 8th, 1890) to subject the patients in the first stage of typhoid fever to absolute starvation. He recommends to withhold all nourishment until the patient calls for it, but to give water whenever required. At the same time absolute rest in the recumbent position is insisted upon, in order to reduce the waste of the heart's strength to a minimum. These are the conclusions which Dr. Licorrish deduces from his statements:

"1. That typhoid fever may be aborted.
2. That to be so aborted the patient must be

*Read before the Practitioner's Club, Newark, New Jersey.

seen and treatment begun within the first few days of its onset—initial chill. 3. That our chief aim should be to restore the appetite, so that the patient may be nourished and rendered able to throw off the disease. 4. That to create an appetite the patient should be deprived of food until nature demands it, or if any be given only in very small quantities at a time. 5. That the maintenance of the horizontal position, so retards or prevents heart weakness as to enable us to starve the patient without any risk. 6. That great care should be taken in feeding the patient after he has regained his appetite, for should it be again lost, the temperature rises and a relapse occurs."

The chief difficulty that presents itself to the adoption of Dr. Licorrish's starvation method, is the fact that, as we generally meet typhoid fever, in this part of the country, it is no longer in the incipient stage to which alone it is claimed to be admissable. The cases which we are called upon to treat both in private and hospital practice are generally from one to two weeks under way, and beyond any possibility of abortive treatment.

Again, may, we not justly suspect that numbers of these so-called aborted cases, in which the starvation method was apparently successful were not real cases of typhoid infection, but simply forms of malarial or ephemeral fever?

Another view which is taken by some, tending to a similar nihilism in practice, is that typhoid fever, being a self limited disease, the less interference with its natural course the better; that the typhoid bacillus during its growth and development evolves certain ptomaines or chemical putrefactive poisons which at last prove self destructive to the microbe. As an example the yeast cell is pointed to, which during saccharine fermentation, keeps on developing and multiplying until sufficient alcohol is produced to kill its own vitality, after which not even the addition of new yeast cells or sugar will be capable of revitalizing the fermentative process.

But it does not appear in accordance with the principles of truly conservative medicine to rely entirely upon the self limitation of morbid processes and to limit ourselves to the role of passive clinical observers. The eventual ptomainic self-destruction of the microbe is not the important element in its pathogenic history. The structural changes in the various organs, which accompany the invasion and the development of the bacilli and their interference with the normal performance of the physiological functions of the organs invaded are the main concern of the practitioner. What becomes of the bacillus, whether he is finally starved to death, or dies in his own venom, is of far less importance to us than the question of how to counteract the destructive processes in the localities of invasion, in the tissues and in the blood.

If by the supply of a proper amount of food, the tissue-waste can be rendered less, or compensated for, or if the same end can be accomplished by the reduction of excessive pyrexia, we certainly leave the patient at the end of the fever in a better condition for more rapid convalescence and repair, and, by having kept his standard of vitality at a higher level, less liable to yield or succumb to the complications and after effects, which so often follow the disease.

That there is a possibility by proper alimentation to compensate to a certain extent the waste effects of the fever, is conceded, I think, by all modern clinical writers. The question: what is the proper alimentation in typhoid fever? is one not so easily answered.

Let us take the natural division of foods and examine into their adaptability to the demands of nutrition under the conditions of fever, according to physiological laws. First, the nitrogenized or albumenous foods, the proteids, including milk, eggs, jellies, strong meat-broths, etc., while easily digested by the stomach and made ready for absorption and assimilation during a state of health, are far from undergoing the digestive changes with facility, in typhoid fever, and for very good reasons. The secretion of the digestive juices throughout the alimentary tract depends largely, if not entirely upon the rapid and normal growth, casting off, and renewal of the epithelial cells. Epithelial cell-life lies at the bottom of digestive energy and of digestion and assimilation, from insalivation down to gastric and pancreatic digestion and lacteal absorption.

It needs neither much clinical study nor investigation in the autopsy room to teach us that in cases of typhoid fever the mucous membranes of the alimentary tracts, from the mouth down to the rectum are in a condition of very sluggish epithelial cell-growth and renewal, and as a result unfit to furnish the digestive juices needed for proper nutrition. Hence, in whatever form albumenous food may be supplied to the fever patient and in whatever quantity, only a very small fraction thereof will meet the normal physio-

logical conditions, for digestion and assimilation, and thus help to repair the fever waste.

The introduction of peptonized meats and pancreatinized milk may, to a certain extent, assist and facilitate the process, but even here, in the mere process of absorption the epithelial and lymph cells also play a primary role. It is an entirely wrong view to look upon the absorbent surface of the alimentary canal as simply a filter, and to consider absorption as a quasi mechanical process of osmosis or dialysis, and to suppose that by putting in a quantity of artificially digested and dissolved albumenous food it will filter right through the absorbents into the blood. The action of live epithelial cells is needed here as well as in normal digestion, and where this epithelial cell activity is deficient, as it is unquestionably in typhoid fever, even peptonized proteids cannot be claimed to compensate for more than a part of the activity of the secretory epithelial cells, and they furnish no more of supply to cover the waste than the crippled epithelial cell-life of the absorbent machinery can accomplish. This, to some, who may be over-enthusiastic in regard to the immense value which is claimed for artificially digested foods, particularly by their manufacturers and venders, may sound like medical heresy, but let me call attention to a simple fact. No less an authority than the eminent Berlin clinician, Prof. Ewald, has published his observation on the value of the use of peptonized eggs administered by the rectum. (*Zeitschr. für Klin. Med.* Bd. XII. 5 and 6 p. 407), and he found that these peptones as far as resorption by the rectal mucous membrane is concerned are entirely irrevelant. Enemata of non-peptonized eggs were as readily absorbed and as efficient.

There is no particular form of diet which has found more advocates and is more commonly relied upon in typhoid fever than the milk diet. In Germany its use is almost exclusive, being supplemented only by gruels and thin soups. At one time in England and in the United States, the homes of the two principal beef-eating nations, the beef-tea, and beef-juice fever held the same relative important as the milk diet in Germany.

The abundance of meat supply in the former countries and its restriction in the latter undoubtedly explains the difference in popular opinion as to the relative values of milk and of meat juices for fever foods; for I venture to say that in the modes of cutting, of cooking and utilizing meat food in the United States, as much is thrown away as waste, as is used for the population of the whole of Germany. Of course it is not intended to compare milk as a physiological nutriment to beef-tea, or beef-juice, but to me it is doubtful whether the casein and albumen, representing the nitrogenous parts in the milk, perform even a fractional part of expected alimentation in the peculiar pathological state of typhoid fever. I have seen typhoid fever stools of patients under milk diet, largely consist of curd in various states, in flakes and grumous masses, and in a recent autopsy the stomach was found to contain a large quantity of a sticky, pasty, pulpy mass of curd. It is not the amount of nutritive material which any particular article of diet contains, physiologically considered, which is at question in this discussion, but how much of the amount can be rendered contributary to waste supply, under the peculiar pathological conditions of the digestive tract—how much can be digested. It is the writer's conviction that very little of the casein of the milk given in typhoid fever is really digested and that its other constituents, the milk serum with its salts, and its sugar and its cream form the essential elements of nutritive value in these conditions.

There is one reason why, in the alimentation of fever patients, less stress need be laid upon the introduction of proteid food, namely, the fact that whatever tissue waste there is in consequence of the normal elevation of temperature, it is the conversion into heat of the food introduced, that is of primary importance. We must reduce as far as possible the general tissue waste, or prevent it. Can we expect tissue repair, particularly of muscle, tendon and the fibrous structures as long as the combustive process exceeds the normal? The conversion of albumenous food into caloric is a much more complicated chemico-vital process than the conversion of the simple hydro-carbons or carbo-hydrates into the same. It gives rise to the formation of a larger amount of side products to clog up the channels of excretion. Does it not seem reasonable then that we should attempt to regulate the food supply in fever so as to restrict it to the simplest kind of food which can, without complicated processes of vital chemistry, be converted into heat and thus save to the extent to which they may be utilized the combustion of the living tissues.

This brings us to the use of the hydro-carbons and the carbo-hydrates in fever—fat, sugar and starch. The same cause which has been mentioned as interfering with the digesting of proteid,—low activity

of epithelial cell life—also comes into play here. The cream of the milk which the patient drinks, is, in ordinary physiological digestion, readily fitted for absorption through the emulsifying action of the pancreative juice. But in typhoid fever this gland partakes of the same general sluggishness of its epithelial cell-life as do the other secretory glands. As far as the lacteals are concerned we must not forget that they are not merely filtering apparatuses. It had been supposed that the leucocytes, the wandering lymph cells as the Germans call them, were the active elements in the fat absorbent processes of the intestines. According to Zawarykin they were presumed to wander between the epithelial cells to load themselves with the fine fat granules of the intestinial contents and then, penetrating the deeper layers of the mucous membranes, to return to the lymphatic vessels. But investigations made by A. Grünhagen, (*Arch. f. mikrosk. Anat.* XXIX 1 p. 139, 1889, *Schm. Jahrb.*) seem to have conclusively shown that the lymph cells are not at all concerned in the absorption of fat, but that this process is connected with the cells of the cylinder epithelium. These are found to be permiated by little clusters of fat, imbedded in various shapes, globular or radiating, in the cell protoplasm, whence they reach the lymph vessels of the mesentery. Bearing in mind that the glands particularly involved in typhoid fever, the solitary and agminated glands, are absorbent glands, we can readily understand, how fat absorption and consequently nutrition must be interfered with when large surfaces of these glands are deprived of their epithelium. Fortunately, however, this class of food can be introduced directly into the system by inunction through the skin. To the extent that this may be done we have a means of supplying a certain amount of caloric-yielding fuel, which may save a certain amount of the living tissue from combustion and waste. It must not be expected that we can thus compensate for all the waste, but whatever waste of tissue may thus be saved, be it ever so little, is so much gain. As a matter of clinical experience I may say that I have resorted to this feeding through the skin in a number of cases of wasting disease with good results. There is one fat, particularly well adapted on account of its easier absorbability to this purpose—the sheep wool fat, or lanoline.

I am aware that the absorbability of lanoline and of other fats through the skin has been denied or questioned, except in cases where the skin is broken; yet as far as my experience, clinically, justifies me to form an opinion decidedly in the affirmative. In a very severe case of neurasthenia with hysteria and extreme leucocythemia in a girl fifteen years of age, who had almost absolutely refused food until her weight had gone down from over 125 pounds to below 100 pounds, lanoline inunction-massage was systematically resorted to. On two occasions, when the blood was submitted to microscopical examination to determine the relative number of white and red corpuscles, the former being found in abnormal ratio, incidentally the blood was found to contain large numbers of very minute fat granules, and as the blood had been taken from a part of the body not subjected to the inunction-massage, there can be little doubt that these fat granules had entered the current of blood through the skin.

Of all the foods the easiest of digestion, as far as simplicity of conversion into heat is concerned, of course starch and sugar stand first. The carbo-hydrates, starch and sugar, are more digestible than the hydro-carbons or fats. If then, we are able to introduce this class of foods in a state that they can be readily digested without giving rise to much detritus and without provoking mechanical irritation along the intestinal tract, we have a ready means to counterbalance to a certain extent the loss caused by the fever temperature. The food thus converted into caloric saves so much of the living tissue from being burned up. It is not necessary to dwell upon the processes of the conversion of starch into glucose or maltose, or of cane sugar into glucose, in order to render them fit for assimilation, nor need we go into a lengthy discussion as to the production of glycogen, the product of the carbo-hydrates in the liver. Suffice it to say that we possess at present, various preparations in the form of malt extracts which speedily, when mixed with the food, or given immediately afterward, cause conversion of starch and sugar into glucose and maltose.

One of the most distressing conditions in typhoid fever is the dryness of the buccal cavity. This is only increased by an exclusive milk diet. Starchy food, like boiled rice, either with milk or without it, is very grateful to the patients, as they are able in a moderate degree to exercise the pleasurable function of mastication. During my January service in the German Hospital about a dozen cases of typhoid fever were put upon partial rice diet, the rice being given with a proper amount of one of the malt extracts, and I must say that the result was gratify-

ing to me and the patients themselves. During the February service the same plan was followed with equally satisfactory results.

Hence, I do not hesitate to call your attention to the propriety of enlarging our fever dietary by the more liberal use of starchy food, and of curtailing the excessive, if not exclusive use of the milk diet, which contains too large an amount of undigestible and unassimilable proteids under the conditions of typhoid fever.

In regard to the therapeutic treatment of typhoid fever, I must limit myself to only a few general points. I am no believer in any routine treatment, and a firm advocate of individualism in disease. The lowering of excessive temperature so as to reduce the bodily waste to the minimum point attainable, is certainly one of our chief indications. Whether in one case it is accomplished by the cold bath, in another by ablutions or the sponge bath, or in other cases by any of the various antipyretics, are questions to be decided by the physician, after due consideration of the surroundings and of the individual history of each case. As a rule I think we should not allow the temperature of our patients to rise much above 103° F. nor should we interfere when it is at 102° F. or less. Of the intestinal antiseptics we have our choice in naphthalin, salol, bismuth and others; with some, however, i. e. carbolic acid, much caution should be used on account of the risk of inducing nephritic complications. When there is excessive peristalsis and the heart becomes weakened after the second week small stimulating doses of opium, say 3 grains of Dover's powder, are useful as far as my experience goes. I have been in the habit of resorting to the acid treatment in most of my cases, from the beginning to the end of the disease. The sulphuric acid is preferred by me for various reasons. In the first place, properly diluted with water and sweetened, it is more palatable than nitromuriatic, or simple hydrochloric, or phosphoric acid, which latter is mostly used by the Germans. Secondly, laboratory investigations as to the action of the acid as a germicide place it at the head of the list of acids as shown in a table in Kitasato's paper of results obtained in experiments in the Hygienic Institute, at Berlin, (*Schmidt's Jahrb.* 1888, No. 1, p. 8). In addition, as we all know, sulphuric acid added to a solution of cane sugar assists in converting it into grape sugar or glucose thus aiding digestion of the carbo-hydrates.

Finally, attention must be called to a practice which has recently come in vogue and with good results, namely, the washing out of the lower bowel with warm water once a day, irrespective of the presence or absence of diarrhœa. The object accomplished thereby is the more speedy removal of infectious material from the intestinal tract.

I will conclude with the good old maxim, nearly two thousand years old: "Prove all things; hold fast that which is good."

PATENT NOSTRUMS.*

BY L. W. FLANDERS, M. D.,
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I have ventured to bring this subject before you because I have never heard it discussed at a medical meeting, and, it seems to me, that it is an evil too apparent and wide-spread to be passed over without comment. So far as I know, there has never been any decided movement made on the part of the profession towards exposing the patent medicine frauds with which the country is filled. There have been one or two journals started with this object in view, but they have failed for lack of support on the part of the public, and the violent opposition of the manufacturers of these secret preparations.

We all know how much faith the general public has in patent nostrums. As practitioners we find them every day, not only in the hands of the ignorant, but, also, among those whose educational advantages have been of the highest order. I well remember my surprise upon seeing a gentleman of my acquaintance, a man of more than ordinary ability in business matters, bring forth a bottle of Warner's Safe Cure and take a huge potion before breakfast. I asked him if he had any "kidney difficulty" and he replied, "No, but there is a great deal of Bright's disease going about and I don't propose to have it creep on to me if I can help it." This would lead one to think that he was an enthusiast in prophylactic medicine, but he was not; for, he had a cesspool within ten feet of his well, and no amount of patient argument would convince him that they were dangerous neighbors.

The people from whom patent medicine men reap their richest harvests are those who are suffering with chronic and long-

*Read before the Vermont State Medical Society, Oct. 15–16, 1891.

continued diseases. Wearied with continual suffering and disappointed in the efforts of their physicians they grasp eagerly at anything that affords a prospect of relief, and the knowledge of these "Cure-alls" comes in spite of the most strenuous efforts on the part of the doctor. Our mails are loaded with circulars from the so-called "Dispensaries" carrying masses of corruption, lies, and impurity into the very hearts of our families. Our daily papers are full of advertisements designed to frighten the weak and timid into trying some celebrated nostrum. A large head line, "*Mother's don't let your child die!*" is followed by a description of the case of some little one who heard the "Death Angel," in large capitals, fluttering over his head and was saved by a timely dose of Somebody's Sarsaparilla. Then follows a list of trivial symptoms common to every growing child, declared to be the forerunner of frightful disease, which a dose of the aforesaid Sarsaparilla will surely prevent. The mode of approaching chronic invalids is crafty but not flattering to the profession. "You have suffered years; you have tried various physicians who have given you nauseous drugs and subjected you to needless operations," then in large black type, "What benefit have you received at the hands of your physicians? None!" (I quote literally.)

So much for advertising. Now let us see if these men give an equivalent for the money paid and if their printed labels are true or false.

A fashionable journal which comes to my notice frequently, has a column devoted to correspondence with ladies. Every week comes an inquiry for something to improve the complexion. The answer is invariably, "Recamier Preparations, which are harmless and endorsed by the leading ladies of the country." Recamier Balm when analyzed contains, according to good authority, corrosive sublimate and oxide of zinc. It costs, at the highest estimate, ten cents; it is sold for one dollar and a half a bottle.

Dr. Herrick gives a description of his famous plaster; tells us that it has been the labor of years to bring it to perfection; and calmly informs us that the holes had to be cut in it to allow the deleterious matter drawn from the body by the plaster to escape.

Some time ago I had a case of neurasthenia in which the patient had contracted the morphine habit in trying to get relief from insomnia. This I was endeavoring to break him of, and, upon the occasion of one of my visits, he placed in my hands a bottle of Scotch Oats Essence; warranted to cure all nervous disorders and to be a specific for the opium habit. This he was anxious to try and was very indignant because I would not consent to it. The composition contained as I have since learned one eighth of a grain of morphine in every teaspoonful.

Again, I had a case of heart disease in a lady seventy-two years old. There was marked cardiac dilatation, a weak impulse, and, of course, the general œdema was very great. The patient received from a friend a package of "Dropsy Balls" with many recommendations as to their efficacy. They were fully three-quarters of an inch in diameter, a dark, pasty mass, looking like tar and molasses. The directions were to take one at night, and in the morning to follow with a teaspoonful of Epsom Salts every hour, until there had been fifteen or twenty movements of the bowels. The fee to begin with was fifteen dollars, and if a cure was effected, fifty dollars. It is needless to remark that the "Balls" were a blind and the patient paid fifteen dollars for the advice and a pound of Epsom Salts.

The latest monstrosity I have met with is "Wm. Radam's Microbe Killer." The trade-mark consists of a picture of William armed with a metaphorical microbatic club, if you will allow me to coin a word, endeavoring to knock the skull from the gentleman upon the "Pale Horse." This delightful medicine comes not in bottles, but in gallon jugs; two gallons in a case. Of course, it cures everything; but phthisis is the specialty. The patient is to drink it, bathe in it, inject it into his rectum and in short fairly luxuriate in an atmosphere of this wonderful compound. According to the Druggists' Circular this remedy appears to be composed of oil of vitriol, four drachms; muriatic acid, one drachm; red wine, one ounce; spring water, one gallon. The manufacturers print scores of testimonials of the wonderful cures effected by its use, setting forth how this one was nearly dead with phthisis and that one crippled with chronic rheumatism, but after taking a few gallons of Microbe Killer were permanently cured. Think of it gentlemen! medicine taken by the gallon, and yet there are those who claim that the Homœopathic school with its minute dosage is increasing in popularity.

What are such testimonials worth?

Some physician has claimed that he could get testimonials of cure as the result of a medicine composed of pounded brick, and

I have no doubt but that he could. We have all performed miracles with brown bread pills. A gentleman of my acquaintance consulted a doctor as to the advisability of putting a patent plaster upon his back. "You might just as well bind on a book-cover!" was the reply. Taking this literally the sufferer went home and actually bound on the cover of an octavo volume and returned in a few days to report a cure and to express his surprise that so common-place a remedy should be so efficacious.

Who can estimate the harm done by these unreliable preparations?

The most powerful and dangerous drugs are placed in the hands of the ignorant. Some of us have seen dead infants who were soothed into their last sleep by Mrs. Winslow. I, have seen an old lady upon the verge of collapse from using Athlophoros too zealously; presenting the toxic effects of salicylic acid and colchicum. If the red label for poisons was faithfully carried out what a gorgeous array we should have upon the patent medicine shelf!

What can we do as physicians to remedy this great evil?

As a rule we are too luke-warm in the matter. We utter a feeble remonstrance occasionally but that is about the extent of our efforts. In many instances postmasters are paid to send lists of chronic invalids to the proprietors of "Dispensaries." See that it is not done in your town. Enforce the law against traveling quacks and venders of secret nostrums. Attend to our chronic cases more faithfully. In many instances the patient resorts to quack remedies because his physician takes no interest in his case and does not visit him unless sent for. Above all, encourage analyses of these preparations and acquaint ourselves as far as possible with their constituents. The patient may say, "How do you know whether Warner's Safe Cure is good for my disease or not? you don't know what is in it," and he has the best of the argument. But if you can show him that he is paying a dollar for ten cents worth of salt-petre, you have a powerful argument on your side; you appeal to a most tender spot—his pocket. Most of us have access to the Druggists' Circular, in which is published from time to time analysis of the more important patent preparations; so that with a little care we may be prepared to show our patient that his celebrated remedy has been used for years by physicians, and can be purchased in the regular way at half the price he paid for it.

Special Correspondence.

THE TENTH INTERNATIONAL MEDICAL CONGRESS, AT BERLIN, AS I SAW IT.

BY GEORGE DOUGLAS, M. D.,
OXFORD, NEW YORK.

DELEGATE FROM THE AMERICAN MEDICAL ASSOCIATION TO THE WORLD'S MEDICAL CONGRESS AT BERLIN, GERMANY, 1890.

(RESUME.)

Place of meeting.—Officers.—Some of the distinguished delegates of the Sections.—Some of the papers read.—Social festivities.—Koch; biographical sketch; his researches, aims and efforts.—Great desirability of a remedy for tuberculosis.

One of the events which crowned the decennial year of 1890, and made it memorable, was the International Medical Congress which convened in Berlin, Germany, August 4th. The largest gathering of representatives of the medical profession the world has yet seen, and probably the largest the present generation will ever see.

The first gathering of the Congress on Monday morning, 11 A. M. was in a grand amphitheatre, called the Circus Renz, resembling in shape the Coliseum at Rome, seating upwards of eight thousand persons, but on that occasion every inch of standing room was occupied and filled and crowded by at least ten thousand persons, among them army officials and representatives of Government in conspicuous dress with imperial decorations and honorary badges of many beautiful and striking designs; and delegates not only from every country of Europe and from America, but from Asia, from Africa, and from South America, from Australia, and from the islands of the sea,—scientists and scholars from every portion of the globe, who had come there to submit to the world's tribunal, the results of their truest thoughts and most patient labors.

The beautiful amphitheatre was draped with the flags of all nations, festooned with flowers, and made brilliant with flashing lights and amplitude of colors.

After the organization of the Congress, there was first the address of welcome and the reply; when came the able, and most fit

and timely address of the President, the distinguished Virchow, the great teacher of cellular pathology, who, crowned with the knowledge of three-quarters of a century of research, honored and almost idolized by his own countrymen, still survives in a most remarkable grandeur of physical manhood. After the address there was presented before the large audience, from each of the principal nations represented by delegates, one, as the medical representative of such country,—Sir James Paget, of London, the representative of England, and Surgeon-General John B. Hamilton, of our country, but to Sir Edward Lister, of England, was recorded the most enthusiastic reception of them all, evidently indicating the unanimity of the profession in according to him very high and universal honor for his introduction of the antiseptic treatment in surgery, which has given to that branch of our profession such an increased percentage of success, and with it so much greater confidence and respect with mankind at large.

There were but three general sessions of the Congress in this amphitheatre, most of the time being devoted to the reading of papers and to discussions in the sections of the Congress, their place of meeting, a very large and commodious building in the Ausstellungs Park, a famous place of resort with the pleasure-seeking Germans, with halls of entertainment, musical and theatrical, picture galleries and beer gardens, and the surrounding buildings were utilized as places for the extensive exhibits of everything pertaining directly and indirectly to the profession,—not only instruments and appliances of every kind known to surgery,—medicines and chemicals from the largest firms of almost every city in Europe, with some from our own country, but systems of gymnastics, health-lifts, hygienic baths and hygienic beds, improved modes of ventilation, hygienic foods and drinks, seemingly all in all an immense world-wide collection.

This beautiful park was made approachable from almost every portion of the city by public tramways, and from the central part of the city by an elevated railroad, far more commodious, substantial and magnificent in its structure than anything we can boast of in this country.

It was in these eighteen sections of the Congress, embracing all the different departments of medicine and surgery, that the greatest interest was centered. The official languages used at all meetings were German, English and French, but in discussions other languages were permitted, but reported by some one of the secretaries in one of the three official languages, and in this manner ten tongues and twice as many dialects were spoken in the course of the numerous discussions.

Each of these sections were presided over by a President, also a Vice-President, and usually not less than three Secretaries reported papers and discussions.

In the section of surgery in which I registered myself, there were upwards of 1200, and 15 sessions were held in the six days' time of the Congress, which, with the social events of the occasion, filled up almost every moment of time during the eventful week.

I did not, however, strictly confine myself to this section, but went about at will to other sections and especially where and when a paper was to be read by any one of the distinguished members, or celebrities that I felt a special desire to see and hear; and it was to me the fulfillment of a much desired opportunity and a life-time event to look upon such faces as Virchow and Koch and Pasteur and Lister and Esmarch and Tait and Billroth and Oppingheim, Sir Spencer Wells, Sir James Paget, Apostoli of Italy, Barbour of Edinburg and a host of others,—where Canada and the United States met Brazil and the States of South America; where Mexico met Russia; Great Britain met Italy; Spain met Japan; and Belgium and Holland and Sweden met Asia and the islands of the sea; where France only partially represented, but by the noblest and most large-hearted of her sons, was most cordially greeted by Germany, and grew cheerful and fraternal; and America with her 157 delegates, was cordially met and greeted by all, and when the number was given at the first gathering in the Circus Renz, the announcement was greeted with cheers long and loud.

In some of these sections, complaint was made by certain delegates from our own country, England and other representatives, not German, of a lack of courtesy and of proper recognition, and perhaps with reason, for there was somewhat evident the same "animus" as possessed the little lad, who said to his sympathizing playmate, "*You* have no right to cry, for it is my grandma's funeral," and the Germans appeared to some extent to consider it their Congress, appropriate the front seats, and monopolize the time.

The Germans as a nation are fond of social festivities, and there was not any lack of arrangements in this direction, although,

differing in some respects from the usual American style, with invited guests. I was asked on my return if I did not find the Germans a very hospitable people. My answer was—"That depends much upon your definition of hospitality!! If you call it hospitality for a friend to invite you to dine with him, and then he requires you to pay an equal share for the viands, and the wines, then they are truly hospitable." The only free entertainment given was the first, on Monday evening, by the Burgomaster, or Mayor of the city, at the Rathaus or Town Hall, with no ladies present, the expenses of which were paid by a Government appropriation by the Reichstag or Parliament at the recommendation of the German Emperor, who also gave a court reception at his palace in Pottsdam, just before the close of the Congress. At this reception the invitations were limited to four hundred—Germans mostly excluded, and the American delegates remembered at least a *pro rata* share.

Each section had their respective banquets, with speeches, toasts, etc. In the surgical section only 700 of the 1200 registered purchased tickets to the banquet held in a large and beautiful hall of the Hotel Central, perhaps the most magnificent hotel in Berlin, and was presided over by the Royal Court Surgeon, Von Bergmann, with Prince Carl Ludwig present, and at the tables, Sir James Paget, Sir Joseph Lister, Von Esmarch, Billroth, Oppenheim, and on the right of the President, in place of honor, our representative Dr. Billings, of Washington. On the next evening several large balls were given in different parts of the city. I attended the one given in the beautiful winter garden of this same hotel, at which was present the Princess of Germany, eldest sister of the present Emperor, and led with a prominent German official, the first dance of the evening, which was much after the order of the stately minuet of the olden time. After the dance, I had the opportunity of meeting her, and was most favorably impressed with her kindly as well as courtly air, her appearance of good sense, and truly lady-like and considerate manners—a model and a pattern for many of the simpering, vain snobs in our own country, who can boast much more of money than of brains, or intelligence. The Emperor did not return as was expected in time to be present at the Court reception at Pottsdam, and without his presence it lacked point and interest, and the palace itself is one of the least imposing of any of the royal palaces of Germany.

The "Farewell Banquet" and reception was given at Kroll's Garden in the Royal Platz, when upwards of ten thousand were fed and wined and supplied "*ad libitum*" with lager beer, in a way that was highly German, and quite incomprehensible to an American. The eighteen special sections of the Congress were each made centres of special interest by the scientific papers read, containing the latest researches and investigation in these respective departments of medical science.

In the section of Surgery, a very able paper was read by the distinguished surgeon, Oppenheim, on the subject of brain surgery, describing the successful removal of a sarcomatous tumor from the brain, and Professor Gluck, with one of his patients, demonstrated the use of the articulated ivory pegs, in a case of excision of the knee-joint, introduced into the medulla of both bones so as to give support and motion to the joint.

In the section of neurology, the subject of brain surgery at the present time attracting so great attention in the profession, was extensively discussed, with a citation of many unusual cases. Victor Horsely, of London, led in the discussion upon cerebral hæmorrhage, and contrary to my preconceived ideas, it was decided that the ligature of the carotids was of no service in this class of cases.

In the section of obstetrics and gynæcology, Professor Barbour of Edinburgh, read a very comprehensive and exhaustive paper on the stages of labor with consideration of the after conditions and complications which most frequently attend this class of cases.

In this section Dr. Parvin, Professor in Jefferson Medical College, Philadelphia, also read a masterly paper, listened to with much attention, on artificial premature labor, its indications and methods. A long discussion followed, in which many took part, and in particular the question canvassed as to which procedure was the most advisable in deformity of the pelvis, where premature delivery is demanded, whether by the Cæsarean section at or before the full time (which had many advocates) or by enforced labor at the seventh month. The majority of opinions was, however, that the Cæsarean mode was the most hazardous both to mother and child.

On the topic of uterine fibroids, or myomata, Dr. Apostoli, of Italy, distinguished

in galvanic treatment of diseases, read an able paper advocating electrolysis instead of the curette and other surgical measures, and, when advocating his most advanced and radical ideas, was a little hissed by the French, but applauded by all others. In the history of cases treated by electrolysis as given by himself and by others, there was certainly the most satisfactory results shown in this method of treatment.

Dr. Kaltenbach, of Halle, Germany, read a paper upon extirpation of the uterus, in which he cited 82 cases of total extirpation by himself, for cancer and other diseases of this organ, with the result of only two cases of death. After the reading of this paper there was a very interesting and animated discussion participated in by physicians from London, from Prague, by Pozzi of Paris, by Olshausen, by Landau, and by A. Martin of Berlin, the first distinguished operator of extirpation of the uterus, by Czerny, of Heidelburg, and by a gynæcologist of national reputation with an unpronounceable name from Moscow in Russia.

In the section of state medicine and hygiene, Dr. J. Hutchinson, of London, gave a very able and thoroughly exhaustive lecture without notes on the non-contagiousness of leprosy, in which he took still more advanced and positive ideas than in his articles published in the early part of the year,'89, in the British Medical Journal, that leprosy is absolutely not contagious, and that it is by a special kind of poison taken into the system in connection with food, that this loathsome disease is induced. A certain specific kind of "bacteria" has been found in the blood of lepers, and this is found only in a certain species of fish, and it is by the eating of this kind of fish that the once healthy individual or person becomes a leper. This species of fish is found to be common in leprosy districts, and as the varieties of leprosy are the same the world over, in hot and cold countries alike, this fact would indicate that the cause must always be the same. In Norway, India and the West Indies, nurses and surgeons do not fear to come in contact with lepers, so far as contagion is concerned. Hundreds of surgeons daily encounter the same risks that Father Damien, the Catholic Priest, did, but he exposed himself to other dangers as well, partaking bountifully of all kinds of fish and food in use in that country of lepers.

In England the most intimate possible contact with lepers has not been sufficient in itself to communicate the disease. A striking illustration and proof of this is the instance of the colony of lepers from Norway that located in the northwestern portion of Minnesota, not one of the wives, or children being, or becoming lepers.

These advanced ideas by Dr. Hutchinson were given more especially in the interests of humanity, and to prove how needless the oppressive regulations in almost all countries, of making this unfortunate class outcasts, expelled from society and forbidden to mingle with the rest of mankind.

Dr. French, of Brooklyn, led with an able paper in his specialty—the throat, and Dr. Wood's address on anæsthetics was a state paper and was assigned a place of honor—that of the closing session.

I will not attempt to give you an idea of the subject matter of all the papers heard, for that would be impossible, but every delegate will remember so long as memory lasts, the scene when Koch stepped forward to read his "Researches"; the ovation which he received, most strongly disproving the old adage that "a prophet is without honor in his own country."

Those salvos of applause were received with no gratified look of vanity, though courteously acknowledged, it was with almost a perceptible manner of annoyance, and when the cheers had subsided and he commenced the reading of his paper, his gentle yet decided bearing, saying so plainly, that he was giving us the truth, as he had found it, his deep-set eyes, so true and steady, you could not but accept his deductions and conclusions without a question. Not being able to follow his paper, which was in German, I watched with feelings akin to awe, the lines and shadows on the faces of those listeners who, gathered there from the ends of civilization, hung upon his words with breathless interest.

I have many times seen men and large audiences profoundly moved by passionate orations and stirring appeals from forum and pulpit, but never have I seen an audience of intelligent, educated, cultivated men, listen with such intense interest as to this man, who stood there, striving to give to dying humanity a respite from a disease, which in all its varied, hydra-headed forms, has swept to an untimely grave far more than any other; I had almost said than all others.

In this Medical Congress, so largely represented from all civilized countries, while listening to the papers of these intellectual and professional giants, one could seem to divine that there was a pervading presentiment and belief that a great tidal wave in science was imminent, and that it centered

on the discoveries of Koch. His name was upon almost every lip, his researches the absorbing topic of the hour.

Bacteria was in the air, and in its many forms or names of bacilli, microbes, micrcosma, was spoken of and speculated upon, as the cause of almost every disease that flesh is heir to. The prominence of this distinguished investigator and scientist will be my excuse for giving a brief history of the man, from such and various sources as I have been able to collect them.

Professor Robert Koch, as we are told, was the third of thirteen children, the first nine of whom were boys. He was noted as a studious lad, and early in life developed a fondness for the microscopical study of lichens and mosses, and when his mates and companions were out hunting and fishing, he was making such minute investigations at his favorite pastime. He completed his course in the High School at Clausthal, Hanover, at the age of seventeen, but was unable until he was eighteen to enter the University of Göttingen, where he finished his studies.

In his second year at this University he wrote a thesis which won the first University prize. We next hear of him as a physician at Wollstein, a Polish country town, in the district of Bomst in the Grand-Duchy of Posen, and while there received the government appointment of district physician of Bomst. It was at this time that he made his researches and investigations and performed his experiments relating to anthrax, and its characteristic bacilli, and in 1875 published his first work on anthrax, giving to the world the results of his discoveries, and the etiology of that destructive disease, and also published some treatises on wound infection.

In the summer of 1879 he was appointed to the position of medical expert in the law courts in connection with the University at Breslau, but this position was not satisfactory to him, neither scientifically nor pecunarily and he returned after a few months to Wollstein, where his place as district physician had been kept open for him. He was, however, soon after, in 1880, called to the newly founded "Imperial Office of Health" in Berlin, where he has since been pursuing his wonderful researches on the tubercle and cholera bacilli, which we earnestly hope, believe and trust, will prove not only a great honor to the German Government, but of great advantage to science and to all mankind. The distinguished Professor Ferdinand Cohn, of Breslau University, the famous botanist and scientist says: "When Koch came to my Institute on April 30th, 1875, I can truly boast that in the first hour of our intercourse, I recognized in him an unequalled master of scientific investigation. His method, his experiments, the classic clearness of his statements, were all as perfect in his first as in all his later researches." He further says: "All Koch's works have been so complete in form, and contents, that nothing remained for those that followed but to confirm them for it was not possible to add anything essential."

But in this medical Congress, notwithstanding that none doubted the sincerity of this new prophet, there were not wanting those possessed with a spirit of skepticism which inclined them to mock at the arguments of Koch. Against Koch was Virchow, unwilling to abandon his long cherished biographical doctrines, and Mr. Lawson Tait, the distinguished anatomist, surgeon and controversalist, always vivacious, and somewhat reckless in manner, facetiously, almost derisively said that, "if ever he got together enough bacteria to make a poultice, he would slap it on the next wound he had to dress."

There were others, who with greater candor and sincerity, willing to accept whatever might be truth, asked the question, "Have we yet struck the right trail?" and "Have we not been too much swayed by our hopes?" Time and still further investigations can alone answer these questions. This man is no charlatan, but an earnest seeker after truth. Look on his earnest face, his deep-set truthful eyes, and you will not doubt that.

By the ignorant and obtuse, he is not understood, and consequently misrepresented; by the envious maligned; by many of the conservative class, doubted; by the cynical class, sneered at; descried by the egotistical, who claim themselves the only fountains of knowledge; but to the earnest seekers after truth, who believe there are more things in heaven and earth than has yet been found in philosophy or science, he will be accorded at least respectful attention and a candid hearing. The superior effects of the treatment of many diseases by hypodermic injections are already very well known. As example, hemoptysis by injection of ergot; of syphilis by hypodermic injections of cyanide and bichloride of mercury, and chloride of gold and sodium; the prompt effect of Sammter's treatment of erysipelas by carbolic injection; strychnia and quinine in typhoid conditions. The experience of Tyndall, in New York, in the vaccination process, for the cure of tubercu-

losis, promises favorable results, and Dr. Landerer has obtained beneficial effects in phthisis from hypodermic injections of balsam of Peru, which he says goes at once to the diseased part, thus stimulating the animal fluids. That certain chemicals have a *selective* action on tissues cannot be doubted; as, for example, the hypodermic injection of cantharidin, resulting in the production of inflammation of the air passages; ard, coline, a volatile liquid, alkaloid, from the areca nut, has a selective action on the heart, digitalis upon the cells and vascular system. This would seem to show that there must be a sort of antagonism or isomerism between animal and chemical and vegetable poisons; and why may not more universal application be made of this principle, with a view of obtaining more therapeutic agents and effects.

The great hopes and expectations formed at the first publication of the methods and discoveries of Dr. Koch, have resulted in decided disappointment, but the most recent statistics obtained by the German Government, from fifty-five hospitals would indicate that the reaction that has set in against his treatment, is beyond what facts would justify, considering the utter hopelessness of this class of diseases as treated by other and former methods, these statistics showing that while less than 13 per cent. of cases of internal tuberculosis, were cured, 30 per cent. were improved, leaving only a little less than 60 per cent. of unimproved and fatal cases.

Of cases of external tuberculosis about 15 per cent. were cured, upwards of 40 per cent. improved, leaving less than 50 per cent. of fatal and unimproved cases, in this, as it would seem, more curable form of tubercular diseases. Koch himself, while believing that his remedy "Tuberculin" is a cure for incipient tuberculosis of the lung, does not claim there is yet established the fact of its being a permanent cure, and fears that in advanced tuberculosis, its use will no more than prove beneficial. The first marked change by its use in tuberculated lung affection is that the expectoration becomes non-purulent, and this change greatly retards the rapid wasting of strength and vitality so marked in advanced tuberculosis of the lung.

Thus far the most striking and rapid cures have been effected by its use in lupus, where recovery has repeatedly followed a single injection. The investigations of Robert Koch have unquestionably opened up the way to discoveries into new and valuable ways of diagnosis and treatment of diseases, where microbes play an important part in the inception and progress of disease, and out of it may finally come more certain and effective measures, prophylactic and curative. It was from Robert Koch that the illustrious Pasteur obtained his idea of his present treatment of hydrophobia, from a demonstration made by Koch in King's College, London, of his then new method of cultivating microbes, during the International Medical Congress in that city in 1881. It is in the same line of investigation, discovery and treatment, as that by which the immortal Jenner gave to the world the methods of restraining and preventing what was less than a century ago, one of the most dreaded and terrible of the diseases that scourged the human race, and gave to the physician that almost omnipotent power by which he can lay his hand on that loathsome disease (the small-pox) and say to it, "Thus far shalt thou go, and no farther, and here and now shall thy devastating progress be stayed."

If this can be done to tuberculosis, in all its manifold forms and complications, what a boon it will be to poor, suffering humanity, and how well worthy our greatest efforts, our most diligent and patient study and research. In my heart are no cynical sneers, no ridicule or contempt for Koch, or any other earnest worker in all and every rational method which may tend to mitigate and limit disease and suffering. Consumption, in its comprehensive signification, as generally used, classes among its victims more of those who are refined by nature, beautiful in person, intellectual, brilliant, and attractive in social life, than any other, perhaps all other diseases. How often do we see of the weaker sex (I mean physically, not mentally) those whose beauty and loveliness make even their very presence a benediction and a blessing, long before life has reached its meridian, fade away from family and friends, leaving hearts and homes sorrowing and desolate, some going in the morning of life, and seeming only like beautiful visions, sent for a little time to cheer and bless us, and then taken away.

How well do I remember one such, who, for five brief years was the light and joy of a happy home, filling its very walls with sunshine and music, but who, after only eight weeks of what is not inaptly termed in common parlance "galloping consumption" immediately following the birth of her first-born child, one morning in the early springtime, just as the sun was breaking over the Eastern hills, folded the white hands across

the peaceful breast, which soon ceased its throbbings, bade me farewell and then the gentle, loving spirit went away.

The fragrant and beautiful rose that blooms under our window, or in our gardens, gladdening our senses with its sweet perfume, our eyes with its exquisitely blended colors, sometimes fades prematurely; some untimely blight causes its lovely petals to droop and fall, and our hearts sadden with disappointment at the sight of the destruction of what we had thought would cheer us for many a long summer's day, but we have consolation in the thought that at another spring-time it will bloom again. But when disease and death comes into our homes and takes from us the loved and cherished ones, we know that no coming spring-time will ever bring them back to us, we bury them out of our sight, and so much of the light and joy of our life has gone out forever.

God grant that the day may not be far distant when this class of diseases which have so long been the *onus probandi* of medicine, shall, by investigation and research be made as curable and controllable in the hands of our profession, as the once-dreaded small-pox, that marred and decimated the human race. And with this desire in my heart, this prayer on my lips, I bring to a close this poor attempt at portraying "as I saw it" the Tenth International Medical Congress at Berlin.

Selected Formulæ.

ECZEMA.

Hollopeter has used with great success the following:

℞
Ac. salicylic.....gr. xx.
Zinci. oleat.....ʒij.
Cocaine.....gr. v.
Pulv. amyl, q. s.....ʒij. M.
Sig. Use as powder, externally.

The salicylic acid prevents fermentative changes in the skin; oleate of zinc adheres very closely to the skin, and protects it; the cocaine may be put in or left out, conditionally as to whether there is pain or not.

If, on the second visit, there is little pain, and the scales are drying up, the cocaine may be discarded; later, the zinc may be left out, then the acid, so that finally only the starch is left. After this, alcohol may be used.—*Times and Reg.*

TREATMENT OF CROUP.

Dr. Betz (*Revista de los Hospitales*, No. 30, 1891), in a desperate case of croup, used inhalations of the following with success:

℞
Ether.....grammes iv.
Ether acetic.....“ ij.
Menthol.....gramme o.6.
Inhale every fifteen to twenty minutes.

In one day the symptoms had disappeared. The child recovered.

Inhalations of ether diminish congestion, tumefaction and œdema of the laryngeal mucous membrane.

NEW MEDICATIONS AS HYPODERMICS.

Of late, advantage has been taken of the bland qualities of certain hydrocarbons, as also of their solvent properties, to prepare a variety of hypodermic solutions. Several of these have received the names of their suggestors as Picot's, Pignol's, Morel-Lavellée's solution, and in answer to inquiries from some correspondents we give them below:

Picot's Solution.

Guaiacol.....	5 grms.	75 grains.
Iodoform	1 “	15 grains.
Olive oil.....	48 c.cm.	14 f ʒ.
Liquid vaselin q.s. to make.....	100 c.cm.	to make 3½ f ʒ.

Pignol's Solution.

Eucalyptol	14 grms.	216 grains.
Guaiacol.....	5 “	75 grains.
Iodoform	1 “	15 grains.
Almond oil, to make.....	100 c.cm.	3½ f ʒ.

Morel-Lavallée's Solution.

Eucalyptol	12 grms.	180 grains.
Guaiacol	5 “	75 grains.
Iodoform	4 “	60 grains.
Olive oil, to make..	100 c.cm.	3½ f ʒ.

Besides the above: Creosote, 1; almond oil, 15 c.cm.; eucalyptol, 4; almond oil, 10, are in use. The hypodermic dose is from 3-12 c.cm. (50-210 minims) in 24 hours.

In preparing these solutions the aid of the water bath is needed to effect the solution of the iodoform, after which the other materials are added. The bottles and materials should be sterilized in the usual method.—*Pharmaceutical Record.*

MISTURA ANTACIDA.

℞
Cretæ præp.....ʒss.
Sodii bicarb.....ʒj.
Tr. cinnamomi.....ʒss.
Aquæ.....ʒss.
M. Sig. Teaspoonful every two hours.

℞
Liq. potas.....ɱ xx.
Mist. cretæ.....ʒj.
Tr. calumbæ.....ʒj.
M. ft. haustus, t. i. d.

—*The Prescription.*

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The Editor will be pleased to get medical news, but it is important that brevity and actual interest shall characterize communications intended for publication.

LEADING ARTICLE.

IS GENIUS A DEGENERATIVE EPILEPTOID PSYCHOSIS?

A very interesting paper has recently been translated by Dr. James G. Kiernan, from Lombroso's "Men of Genius," entitled "Genius a Degenerative Epileptoid Psychosis." The author, Cesare Lombroso, contends that genius is a degenerative manifestation and supports his views by quoting many men of undoubted genius who exhibited also symptoms of psychical degeneration. Among others he mentions Tasso, Rousseau, Swift, Poe, Southey, Haller, Lenan, Kleist, Gerard de Nerval, Musset Murget, Mailath Praga, Lorani, the Chinese poet Li-To-Kai, Pascal, Ampere, Walt Whitman, Letzman, Dostoyewski and many others, all of whom exhibited, in addition to the genius which has perpetuated their names, various abnormal mental symptoms. Accordingly, Lombroso concludes that their genius was also the outcome of degenerative processes of the mind.

The author of this startling theory says: "From anatomico-biological analysis of the careers of sane geniuses, and those neurotic or insane, of their geographical distribution of the causes (often pathological in character) of their appearance, and of the evil inheritance discernible in their descendants, naturally arose the suspicion that genius has a degenerative origin. This suspicion, whose audacity at first repels, becomes more and more justified by the phenomena exhibited by genius. If the lives and works of the historically great morbid minds be examined, it is found that they, as well as the men who have passed through the glorious parabola of genius without demonstrable mental taint are distinguished by many traits from ordinary men." Succeeding this statement, Lombroso goes on and quotes extensively the lives and works of the men whose names we have mentioned to prove that they exhibited in various forms the symptoms of degenerative psychical changes, or, in other words, that they dif-

fered from ordinary men sufficiently to render their mental operations pathological. The author, we think, has, in many instances, forgotten to take into consideration the environment of those whom he thus brings forward as examples of *pathological genius*, and has unconsciously measured them by the standards of our own times, thus characterizing as pathological mentality many who merely expressed ideas, which, in their age, were universally believed. For instance, he cites the belief of Pascal, that the contact of a relic was able to cure lachrymal fistula as an evidence of unbalanced mentality, but in his time such ideas were very common, and even in our own times, as the translator aptly remarks, not a few persons entertain the same kind of ideas. Another example adduced by Dr. Lombroso we would with Dr. Kiernan object to as inadequate, viz.: Newton is called insane for writing to Bentley as follows:

"By the law of attraction the elongated orbit of comets is explained, but God alone can explain the lateral difference of the almost circular planetary orbit." Lombroso characterizes this as a very singular argument, as has been said by Arago, which places God at the limits where science has not penetrated, and Dr. Kiernan in a footnote justly remarks that this does not differ "from the placing of God in modern times as the limits of the knowable." Many other instances the author has collected from the great geniuses of the world's history seem to poorly support the ingenious and very taking theory which Lombroso has formulated definitely in his very interesting paper. If space permitted we think it possible to enumerate from historical literature a large majority of men of genius, in whom genius was not an expression of morbid mental action, and until better proof than Lombroso's sweeping statements is forthcoming, we prefer to regard genius as a physiological, and not as a pathological manifestation. For opposite views regarding this subject we would refer the reader to Lombroso's paper (*Alienist and Neurologist*, July, 1891), and to a paper by Dr. Kiernan (*Alienist and Neurologist*, Vol. VIII), in which he says: "Genius is not a product of morbid mind. In the exceptional instances where the two co-exist the genius is evidence of a healthy, conservative element, struggling with the incubus of disease."

Book Reviews.

A MANUAL OF HYPODERMATIC MEDICATION: THE TREATMENT OF DISEASE BY THE HYPODERMATIC OR SUBCUTANEOUS METHOD. By Roberts Bartholow, A. M., M. D., LL. D. Fifth Edition; Revised and Enlarged. J. B. Lippincott Company, Philadelphia, 1891.

It is almost a matter of supererogation to review this work, which has already been so favorably received by the profession, and whose author is so widely and favorably known. However, the increased knowledge and practice of the methods described by the author must advance the cause of scientific medicine, and if the time is coming when additional accuracy in the diagnosis and treatment of disease shall demand the more frequent use of the active principles or concentrated preparations of individual drugs, then the study of this book will hasten that day's advent.

By the hypodermatic method the characteristic action of single remedies is manifested, and the observant physician gains both in the study of his cases and the accuracy of his subsequent dosage. It would often be of undoubted advantage to many of us if we were more familiar with the subcutaneous use of remedies, and our success in many cases would often be the more apparent.

The present edition has been enlarged to the extent of about two hundred additional pages, and many of the articles in the preceding edition have been revised or entirely rewritten. As the author remarks: "The additions had become the more necessary because of the increasing importance of the hypodermatic method since the germ theory has so closely occupied the etiological field. It is by means of the injection instrument that in so many instances pathogenic organisms can be reached and effectively treated."

Picrotoxin for Night Sweats.—Picrotoxin is one of the best remedies for *night sweats* of consumption; one dose of $\frac{1}{60}$ or $\frac{1}{80}$ grain taken at night generally prevents perspiring for several nights.

PERISCOPE.

THERAPEUTICS.

TREATMENT OF TYPHOID FEVER.

M. Hayem (*Concours Médical*) gives, in one of his lessons on therapeutics, a new method of treatment of typhoid fever, which he has used with excellent results for several years. It consists in the exhibition of lactic acid as an intestinal disinfectant, and as a means of controlling the diarrhœa. He rejects all internal antipyretics, but reserves the use of baths. Lactic acid, with or without baths, according to the indications, is the regular treatment followed by M. Hayem. He prescribes the acid in the form of lemonade:

℞ Acidi lactici.....ʒiv--vj.
Syrupi simplicis.....ʒvjss.
Aquæ.....ʒxxvij. M.
Sig. To be taken in the course of twenty-four hours.

If there is gastric intolerance, the lemonade may be diluted with seltzer-water.

In slight cases, M. Hayem prescribes 15 grammes (ʒiv) of lactic acid daily. When the evening temperature reaches 40° C. (104° F.), the dose is increased to 20 grammes (ʒv). In grave cases, with hyperpyrexia, 20 to 25 grammes (ʒv to vj) of lactic acid are given with cold baths (20° C. —68° F.), or baths in water gradually made cold. Brandy is given if adynamia is present. When the fever declines, the daily dose of lactic acid is gradually diminished, but is given in daily doses of 5 grammes (gr. lxxv) even during the first days of convalescence.—*Journal d'Accouchements*, Aug. 15, 1891, p. 191.

TREATMENT OF MIGRAINE.

In the *Archiv. für Psychiatrie*, Band xxi., Heft 1, Dr. Neftel has a paper on this subject, of which an abstract appears in the *Neurologische Centralblatt*. He regards the condition as a vaso-motor neurosis, but has nothing new to say about the etiology. As to treatment between the attacks, the circulation must be carefully attended to and kept active. Constipation must be got rid of, which is best effected by the use of diminishing doses of mineral waters and by the use of electricity to the abdomen. Muscular exercise must also be prescribed, and subsequent temporary rest, and nothing should be eaten or drunk until at least half an hour later. Then a cup of freshly boiled water, he says, will be found wonderfully refreshing. The systematic use of electricity to the head is strongly recommended, and Dr. Neftel finds that in some cases the constant current, in others the interrupted, is beneficial. For the attacks themselves electricity also is recommended, together with ergotin for plethoric patients and salicylate of soda for anæmic sufferers, or a large dose of quinine for either class.—*Lancet.*

BROMIDES IN EPILEPSY.

While bromides remain the sheet-anchor of physicians in the treatment of epilepsy it cannot be said that success always results, a circumstance probably due to the fact that the course of epilepsy is often neglected. But according to Poulet better results are obtained by combining bromide with calabar bean, as in the following formula:

℞ Bromide of potassium .....ʒij.
Tinct. of physostigma (1 to 10)..... ....ʒss.
Water to.....ʒviij.
Mix.

The dose of this is a tablespoonful daily, gradually increased to two tablespoonfuls. The best plan, however, is to give a teaspoonful three times a day gradually increasing the dose. Cases which have been treated consistently with the remedy for several months to a year have completely recovered, the only change in the treatment being that in cases where the heart was affected, digitalis was combined with the bromide.

TREATMENT OF ACUTE TORTICOLLIS.

According to Professor Phocas, of Lille (*Rev. des Mal. de l'Enf.*, October, 1891) acute torticollis is far more common in childhood and youth than in adult or old age. He recognizes two main varieties: (1) acute torticollis following immediately a sudden movement of the head, and due to sprain of one or more articulations of the cervical vertebræ—acute traumatic torticollis; (2) acute torticollis following exposure to cold, and due to slight cervical arthritis or to muscular rheumatism—acute rheumatic torticollis. In a few cases the acute traumatic variety may be due to partial rupture of muscles. In either of the two above-mentioned forms clonic contractions may be superadded to the tonic contracture. The muscle involved primarily is usually the trapezius. As to treatment, hot applications are the best anodynes; massage of the contracted muscle is a more effectual remedy, and often gives immediate relief, but M. Phocas recommends

particularly the application of a collar in the following manner. The patient is placed in a Sayre's suspension apparatus as for the treatment of cervical caries; he is then very slowly suspended partially. In this way the muscles are uniformly stretched, and their resistance gently overcome with little or no pain. A collar of moistened millboard is now applied and retained in place by a few turns of bandage. The patient remains in the apparatus about ten minutes more, and when liberated is free from pain. In one case the collar was removed on the next day, and the symptoms had all disappeared.—*Brit. Med. Jour.*

ANTICYLIC ACID: A NEW ANTIPYRETIC.

Müller (*Correspblatt f. Schweizer Aerzte*, August 15th, 1891), of Tokio, recommends anticylic acid as an active antipyretic. It is a white, fragrant powder, with a refreshing, acid taste, readily soluble in water, alcohol and glycerin, and is non-toxic. In a solution of 1: 10,000 it is destructive of even the most resistant organisms. The solutions are clear and do not injure instruments. Administered internally in doses of gr. $\frac{1}{100}$, anticylic acid proved exceedingly useful is cases of pneumonia, typhoid fever and articular rheumatism.

A CASE OF LOCOMOTOR ATAXIA SUCCESSFULLY TREATED BY SUSPENSION.

There seems to be a tendency in the profession, when a new therapeutic measure is introduced, to make it the fashion, and to use it in almost every disease which flesh is heir to. Thus often, because not all of these various conditions are benefited, we lose sight of the one for relief of which the measure was originally introduced and for which it may have proved beneficial, and it falls into more or less disrepute. Such has been the case with suspension as a remedy in posterior sclerosis; for, while originally introduced for the relief of that affection, it was not very long before it was used in almost all forms of nervous disorder. Now it is scarcely used at all. On reading the papers of Mendel, Weir Mitchell, Charcot, Dujardin-Beaumetz and others of like repute, we find that, while the cases of paralysis agitans, neurasthenia, myelitis, etc., were not benefited, those of posterior sclerosis were to more or less extent.

It is the opinion of the writer that when men, such as above mentioned, report successes with a remedy, it must possess merit, and his experience at the Dispensary for Nervous Diseases of the University Hospital confirms such opinions, in support of which he wishes to report the following case:

J. P., aged 39, married, and a member of the Philadelphia Fire Department, presented himself at the Dispensary on May 27, 1890, and gave the following history:

He had never had any illness, excepting syphilis, acquired thirteen years ago, but has suffered from exposure and a rather unusual series of accidents incurred in the line of his duties as a fireman. In 1876 was knocked from a roof to the ground by being struck in the back by a falling flagpole. In 1878 fell from a third-story window to the ground, and in January, 1885, fell through three floors, striking upon his back, and was buried in the débris for twenty minutes. The next was in June, 1889, when he sustained severe burns, in addition to a fall of about twenty feet.

It was after the fall in 1885 that he first noticed anything wrong with himself, suffering for some time after from tingling and numbness in the legs and arms, and some difficulty in walking. This improved somewhat for a time, but he has "never felt right since." About two years ago, considerable difficulty in coming down stairs quickly or in going up ladders was noticed. This kept growing worse until, at the time of his first visit, he was afraid that he would be obliged to give up his position. He then felt as if he were walking upon cushions, and his greatest difficulty in walking was at night. Upon examination, the knee-jerks were found to be absent; sensation delayed in the legs; gait ataxic, but not markedly so; station with eyes closed very poor. There was also some loss of co-ordination in the upper extremities. There were no typical ataxic pains, but had been troubled for some time with what he termed dull rheumatic pains in the legs. Sexual power was not impaired. The eyes were, unfortunately, not examined.

Suspension, by the means of the Weir Mitchell apparatus, was at once begun, being practiced every other day, commencing at first with two minutes, and gradually increasing to three and a half. No disagreeable symptoms were ever experienced. Improvement was noticed in the course of a month, and continued slowly until January, when he had an apparatus put up in the house where he was stationed, and continued the suspension, employing it daily. I saw him again about a month ago, and found him in the following condition: He had

gained in weight twenty-five pounds, and felt considerably stronger; station and gait were much improved, and he was able *to run at quite a fair rate of speed;* was also able to walk a chalk-line drawn upon the floor; the knee-jerks were still absent. His comrades informed me that, before commencing the treatment, they were often obliged to wait a time to enable him to get upon the apparatus when answering an alarm, but that now he was almost as quick as the best of them. It is proper to add that at first he was placed upon anti-specific treatment, but he would not take the medicine, and it was discontinued in a week's time, since which suspension has been the only treatment employed.

Other cases have been also thus treated at the Dispensary, always with some benefit; but as internal remedies were also used, there is, of course, some doubt as to which was the effective agent.—Dr. Chas. S. Potts, in the *Univ. Med. Mag.*

THE TREATMENT OF SYPHILIS BY DEEP INJECTIONS OF CORROSIVE SUBLIMATE; REFERENCE TO INFLUENCE OF MERCURIAL INJECTIONS ON BODILY TEMPERATURE AND WEIGHT.

Dr. Zëlëneff, of Kiev, publishes (*Meditzinskoië Obozrenië*, No. 3, 1891, p. 290,) a careful report on 104 cases of syphilis treated by him in Professor M. I. Stükovenkoff's clinic with corrosive sublimate after the formula: ℞.—Hydrargyri bichloridi corrosivi, vaselini, ana. M. f. ung. cui adde olei vaselini ut f. 1. a. emulsio contin. 22 per cent. hydrarg. corr. subl. D. S. To inject from one-half to two grains of the sublimate. In some cases the following "suspension" was employed: ℞.—Hydrargyri bichloridi corrosivi gr. xxxvi.; olei vaselini 1 oz. M. D. S. To inject one grain of the sublimate. In either case the emulsion was warmed in hot water, and then thoroughly shaken just before using. In the case of half grain doses the injections were repeated once every four days; in that of one grain doses every six; and in that of two-grain every ten. In all, 915 injections were made; 31 patients being treated with half-grain doses, 33 with one-grain ones, and 40 with two-grain ones. The following are the principal deductions from the clinical inquiry:—

(1) In the case of two-grain injections all syphilitic manifestations disappear on an average after five or six *séances:* in that of one-grain ones after eight or nine; and in that of half-grain doses after twelve or fourteen.

(2) A local reaction (at the site of the injection) is mostly but trifling, in which regard the sublimate injections closely resemble those of salicylate of mercury (*vide* the *British Journal of Dermatology*, June, 1889, p. 276). Some pain was observed only in 32 per cent. of cases treated with half-grain doses, in 19 of those treated with one-grain ones, and in 27·5 of those treated with two-grain ones. Only once a two-grain injection caused a rather vivid pain, which appeared on the third day, being accompanied with some rise of the temperature (37·7° C.). Infiltrations occurred only on eight occasions (twice after half-grain injections, twice after one-grain ones, and four times after two-grain). They were always but slight, and speedily underwent resorption.

(3) As to the influence of the injections on the bodily weight, the latter fell in 39 out of 74 patients examined, while in 35 it increased during the course. Of the former 39 cases, in 10 some complications (stomatitis, diarrhœa, etc.,) were simultaneously noticed, while in the remaining 29 (39 per cent.) the fall proceeded without any concomitant phenomena of the kind. For the sake of comparison, the author also examined (*a*) 21 cases treated by injections of suspended yellow oxide of mercury or benzoate of mercury; in 11 cases (of which one was complicated) the weight sank, while in 10 it increased; and (*b*) 60 cases treated with injections of solutions of mercurials (corrosive sublimate, succinimide, or benzoate of mercury); of them, in 32 the weight decreased, of which number in nine some complications existed, but in the remaining 23 (38 per cent.) no such cause could be made out. The comparative observations showed further that (*a*) injections of mercurial solutions gave rise to a more considerable loss in the body's weight than mercurial "suspension"; (*b*) gain in the weight was generally lesser than the fall; (*c*) in the beginning of syphilitic eruptions the patient's weight sank but rarely, and then mostly in the presence of such complications as fever, subjective disturbances, etc.

(4) As to the bodily temperature, in 40 per cent. of cases the first injection of the sublimate "suspension" is followed by a rise varying from 37·6° to 38·5°C. (mostly up to 37·7°C.) and disappearing on the next day. Subsequent injections do not make any impression on the temperature. The

febrile rises do not manifest any influence on the intensity of syphilitic lesions.

(5) Of toxic phenomena there may be sometimes observed gingivitis (it occurred in seven patients, one of whom was treated with half-grain doses, three with one-grain ones, and three with two-grains); salivation (one case of three days's duration treated by two-grain doses), stomatitis ulcerosa (one case of seven days' duration, the affection developing after fifth injection of two grains); abdominal pain and diarrhœa (twelve cases, in three of which half-grain doses were employed, in three one-grain ones, and in six two-grains; in one of the latter cases blood-stained stools occurred.)

(6) The elimination of mercury through the kidneys proceeds much in the same way as in the case of yellow mercurial oxide (*vide* Dr. Zëlëneff's paper in the *British Journal of Dermatology,* June, 1890, p. 190). That is, distinct traces of the metal appear in the urine in about twelve hours after the first injection; after each subsequent dose the proportion of mercury markedly increases for from one to three days.

(7) On the whole, injections of suspended corrosive sublimate in large doses afford a convenient and energetical method of treatment of syphilis. Its only drawback is constituted by occasional irritant effects on the gastro-intestinal tracts.

THERAPEUTIC USES OF INTRAVNEOUS INJECTIONS.

The therapeutic uses of intravenous injections has been ably discussed by M. Mayet before the Lyons Medical Society (*Lyon Médical,* May 10th, 17th, 24th, 1891). Intravenous injections may be useful for three distinct purposes: (1) To make up a deficiency of the quantity of circulating liquid, the result of a considerable loss either of blood as a whole (hæmorrhage) or of its fluid portions (cholera, etc). (2) To favor the elimination of certain toxic principles—namely, to wash out the organism—by largely increasing the quantity of liquid passing out by the kidneys. (3) To introduce various drugs into the circulation, in order to obtain a prompt action. M. Mayet considers that injections employed in the first manner act principally by re-establishing the mechanical conditions of the circuiation, whether transfusion be employed or an artificial liquid injected. In cholera the blood loses a large portion of its watery constituents, and becomes highly concentrated; the introduction of liquid acts here in two ways, by increasing the fluidity of the blood, and by restoring its bulk. Undoubted successes have been in many cases obtained by adopting this method. As to the liquid to be employed, there has been much difference of opinion. What is least likely to be harmful to the corpuscles or the organism generally? Water does not appear to be highly suitable, owing to its known poisonous effect on proteid material, and an "artificial serum" has not in the author's hands yielded better results than simple saline solution. The use of defibrinated blood is doubtful, it being very uncertain whether the foreign corpuscles, ferments, etc., may not exert a harmful influence. Probably the most satisfactory fluid in every way is water containing from 0.5 to 0.6 per cent. of sodium chloride; that has little action on the corpuscles or on the vessels, is easily prepared, and rapidly miscible with the circulating blood. The mode of injection is important. Theoretically, a given vessel should never contain at any moment a quantity of foreign liquid more than equal to that of the contained blood. Thus, if the median basilic vein be employed, this quantity would be about one ounce per minute. In practice, however, not much harm arises from the injection of as much as ten ounces in six minutes, and this should generally be the maximum quantity for a single injection, save in cases of extreme urgency, in which the relative emptiness of the vessels is the chief danger. The quantity injected in a given time should also be regulated by the extent to which the eliminative function of the kidneys is impaired, a point to be specially remembered in the case of cholera. Danger of phlebitis is inconsiderable if proper precautions be adopted in operating. The next use of intravenous injections—to favor the elimination of certain toxic principles—is one which has been much studied of late, especially in its application to uræmia. Its employment in man has been limited, but Dastre and Loye showed its practicability in 1888, and pointed out the necessity for extreme slowness in injecting and for regulating the quantity used by the rapidity with which elimination, which takes some time before commencing, is carried out. This application of intravenous injections is suggested by M. Mayet as a means to be adopted in poisoning by "blood poisons" such as arsenical compounds, arseniuretted hydrogen, sulphuretted hydrogen, chlorate and nitrate of potash, in acute poisoning by salts of mercury and lead, and with some

chance of success in poisoning by alkaloids and digitalis. It might also be successful even in conditions due to presence in the blood of toxines, ptomaines, etc., the results of bacterial growth, and in such conditions as uræmia. The action in cholera is probably of this kind, the products of the comma bacillus being dissolved and eliminated at the same time as the bulk of the circulating fluid is restored. The introduction of drugs directly into the circulation is more doubtful ground, and is a proceeding the advisability of which has been with some reason called in question. Without doubt this is the most certain and rapid method of administration, and the one generally preferred in physiological experiment, as one can be quite sure that the action of the drug will be quickly and surely produced. Of course the hypodermic method is generally sufficiently rapid, but some drugs are unsuitable either from the quantity required, or from the fact that they produce serious inflammation (for example, chloral). Occasionally, too, as after swallowing soluble poisons, it may be desirable to produce emesis by apomorphine more rapidly than it would occur after hypodermic injection, and in these circumstances M. Mayet would be inclined to inject the drug, in very weak solution of course, into the veins. The objections which have been urged against the method are that there is a risk of (1) unduly violent action, and (2) of the formation of clots in the vessel which may become carried as emboli into the general circulation. Both these dangers can, however, be obviated by using sufficiently dilute solutions, and by injecting very slowly. The method of injecting will be the subject of a future paper, as well as the advantage of the employment of chloral, etc., by intravenous injection in cases when swallowing is impossible.—*Brit. Med. Jour.*

MEDICINE.

SPASMODIC SCIATICA.

M. H. Lamy (*Le Progrès Médicale*) reports 2 cases of spasmodic sciatica. Charcot, Babinsky, and Ballet have taught us that deviation of the spine is a frequent result of sciatica; they tell us that these deviations always consist in scoliosis, with an inclination of the vertebral column on the side opposite to that affected with sciatica. However, Brissaud (*Archives de neurologie*, January, 1890) has demonstrated that the scoliosis may be homologous, that is, with an inclination toward the pelvis on the same side as the sciatica, and that this is observed in those cases where the sciatica is of a spasmodic nature.

The two cases recently published by M. Lamy are examples of homologous scoliosis following spasmodic sciatica. In both cases the patients had an apparent shortening in the affected limb, amounting in one case to 6 centimetres (2⅓ inches), and an apparent enlargement of the buttock on the same side. The apparent shortening of the lower limb was attributed by M. Lamy to the spasmodic retraction of the muscles supplied by the lumbar and sacral plexuses,—a retraction caused by pain. The enlargement of the buttock, the author thinks, may be explained by the rotation of the pelvis produced by muscular spasm; the rotation having for an effect the carrying backward of the trochanteric region of the affected side.

GRAFTS AND INOCULATION OF CANCER IN MAN.

La Practique Medicale, Paris, June 30, 1891, in an editorial, strongly denounces the experiments of certain foreign surgeons in regard to the grafting and inoculation of cancer in man. It claims that such experimentation should be as justly a criminal offence as a wrongly-written prescription, and advises that surgeons desirous of knowledge in this direction should make the experiments on their own bodies. In the same issue is published an account by M. Cornil of two experiments in cancer-grafting made by a foreign surgeon whose name is withheld. The first case concerned a woman with a large tumor of the breast, of which after it was extirpated, a very small slice was inserted under the skin of the opposite perfectly normal breast. The incision healed by first intention, but soon an indurated swelling about the size of an almond appeared and was removed. The original and the grafted tumor on examination showed exactly the same sarcomatous structure. The graft showed quantities of cells in the stages of karyokinesis. The second case was one of tubular epithelioma of the breast, also in a woman. The same experiment was tried, with the same result, but the woman refused a second operation. From these facts, Cornil draws the conclusion that grafting of cancerous or sarcomatous tissue is perfectly possible in persons bearing the tumors; that the graft will become fixed, will develop and invade the normal tissues.—*Univ. Med. Mag.*

CONGENITAL RICKETS.

At a meeting of the Section on Orthopedic Surgery of New York Academy of Medicine, Dr. T. Halsted Myers presented a case of marked rickets, in which it was stated by the mother that the greatly enlarged epiphyses of the tibæ, femora and radii were present when she first examined the child a few days after birth. The sternum at that time was also abnormally prominent. The mother had been in good health during the gestation; the father was also healthy. No specific history could be obtained. The child, six years of age, presented all the deformities of rickets in a marked degree, except that the head was well shaped and that there was a marked increase of the normal dorsal curve of the spine, rather than the dorso-lumbar kyphosis usually found in these cases. An unusual degree of permanent knee and hip-flexion also existed, and the patient, when resting, assumed the hand-to-knee position of Pott's disease. The epiphyseal tenderness seemed to indicate an active stage of the disease. After being nursed nine months, the child had a mixed diet, not especially starchy or lacking in animal fats.

ANTIFEBRIN BY BROKEN DOSES.

Dr. M. A. Favrat reports (*Inaug. Disser.*) on the use of antifebrin in broken doses at the *Medical Clinic* at Berne. He is opposed to the doctrine of the curative effect of fever, of which there are no positive proofs. The whole doctrine is based upon bacteriological researches on the influence of elevated temperature on bacteria-cultures. It has found one support in the lack of success had with the modern antipyretics, which have brought discredit upon medicinal antipyresis. But these failures are positively referable, for the greater part to the fact that the antipyretics are placed into the practitioner's hands without sufficient knowledge of their modes of action, their accessory effects, and their drawbacks. A conscientious investigation—the author continues—must determine to what extent the drawbacks of individual antipyretics can be eliminated by different methods of employment. How variously the action of antipyretics manifests itself, is shown in the case of Thalline, which, in large doses, is an entirely worthless medicament, while in repeated small doses, it is one of the best antipyretics we possess.

Dr. Favrat asserts that it is a universally valid rule to administer antipyretics which act rapidly, in fractional doses; those slow in action,—as quinine, for instance,—on the other hand, in large single doses. This it was which induced Prof. Sahli to employ antifebrin—a prompt and reliable remedy, but one which under certain circumstances manifests strong drawbacks—in small, frequently repeated doses, instead of the customary large single doses.

The experiments made at the *Berne Clinic* on 11 patients (8 with typhoid fever, and 3 with phthisis) with 1090 doses of antifebrin have shown that "continual antifebrinization"—as the administration of antifebrin in small frequently repeated doses is called—is an agreeable and mild method of antipyresis, possessing material advantages over the modes of employment hitherto in vogue. It was demonstrated that 0.05–0.1 gramme- [¾-1½ grains] doses of antifebrin, repeated hourly, completely suffice to materially depress the fever in both the acute period and the defervescent stage of typhoid fever. On the other hand, the action of the small doses administered at intervals of 2 hours, is not sufficient to effect a decided depression of temperature in the acute stage,; but in the defervescent stage, it may suffice. True it is, that the fever cannot be entirely dispelled by these small doses; but it is moderated, and the patient obtains relief, subjectively.

The hectic fever of consumptives can also be successfully combated and relief be afforded to the patient, by repeated doses of antifebrin. The remedy acts better the higher the temperature. In consumptives a dose of 0.05–0.1 gramme [¾–1½ grains] often suffices to reduce the temperature more than 2° C [3.6 F] within 2 hours.

In 2 cases, chills, slight cyanosis and perspiration (several times) survened from this medication: however, these symptoms were far less pronounced than is the case with the customary large doses. There is no danger connected with these small doses, because it is within our power at any time to discontinue the antifebrin upon the slightest appearance of untoward accessory symptoms. —*Merck's Bulletin.*

THE NERVOUS TROUBLES OF URÆMIA.

Lancereaux, who has written much and well on the nerve-intoxications, discusses the Nervous Troubles of Uræmia in his recently published "*Lecons de Clinique Médicale.*"

The nervous perturbations in uræmia have not the same significance as the digestive. The gastro-intestinal phenomena, in fact, are,

at least at their onset, compensatory. They present a character of utility, even to some extent of necessity, which must be recognized, and which regulates therapeutic interference. The nervous accidents, on the contrary, constitute always symptoms of ill omen, which must be combated as soon as possible. Moreover, the disorders of the first category result from an elective action on the digestive mucosa, the excretory function of which is solicited by the afflux excrementitious principles. There is nothing like this in the reaction of the nervous system, which is simply encumbered, like all the other tissues, by the products of disassimilation; only it reacts more energetically by reason of its special excitability.

Among the accidents purely nervous, we may first isolate and describe apart the group of *cardio-pulmonary accidents.*

In dyspnœic uræmia the thoracic organs are not directly affected. They only give expression to the functional disorders of the nervous centres.

Dyspnœic uræmia presents three principal varieties: Simple dyspnœa, paroxysmal dyspnœa and spasmodic dyspnœa. Simple dyspnœa is characterized by acceleration and variations of extent of the respiratory movement and by the breathlessness which follows the least effort, even walking. Examination of the mode of respiration always shows a predominance of the diaphragmatic type. This is, moreover, the characteristic of uræmic respiration in general; it is almost exclusively diaphragmatic. The costal type is seen only in uræmic patients who have at the same time material lesion of the lungs or heart. The simple dyspnœa of uræmia patients is sometimes accompanied with laryngeal phenomena, hoarseness of the voice and inspiratory sibilance, which may even simulate serious obstructive disease of the upper air-passages, so as to seem even to call for tracheotomy.

The paroxysmal dyspnœa of the uræmic has been long known as the *Cheyne-Stokes* respiration. It consists in the succession, regular and periodical, of a phase of apnœa or pause, and of a phase of dyspnœa in which the inspirations, at first infrequent, short and superficial, augment gradually in amplitude, become more and more frequent, profound and noisy, then decrease progressively to another pause. The period of apnœa is generally limited to thirty or forty seconds; the complete cycle has a duration of several minutes. The circulation is always more or less embarrassed, the lips are cyanosed; the pupils are contracted during the pause, to become dilated when the respiratory movements are resumed; psychical faculties are more or less obtuse. Apart from the probable influence of cardiac steatosis and certain organic cerebral affections in occasionally causing this form of dyspnœa, it is generally renal and uræmic in its origin, and one or two energetic purgatives often suffice to cause it to disappear for a time.

Spasmodic dyspnœa much resembles spasmodic asthma, and hence has been often described as uræmic asthma. It comes on suddenly, like an attack of purely nervous asthma, and generally without any appreciable exciting cause. It consists in the sensation of a distressing anguish, which obliges the patient to sit up in bed, to cling hold of surrounding objects, and to make painful efforts to breathe. The ordinary description of an asthmatic attack is here applicable only during the relaxation phase; expiration is slow, prolonged, but not wheezing; rarely sibilant and sonorous rhonchi are audible to auscultation, and the paroxysms are not followed by expectoration. Vomiting often precedes or follows the attack; the latter may last half an hour or even an hour and be repeated several times during the day and night.

Uræmic dyspnœa is, in general, much benefited by the exhibition of drastic purgatives.

The *circulatory disturbances* observed in uræmia consist in palpitations more or less intense of the heart or even of the blood-vessels. These irregular and intermittent palpitations are felt during rest, and are often aggravated by movement. They are a frequent cause of insomnia. The pulse is ordinarily accelerated during the crises of uræmia, although it may be preternaturally slowed, as before puerperal or scarlatinal convulsions; here we should interpret the phenomenon as due to a perturbation in the innervation of the vagus.

The *cerebral accidents* of uræmia affect the three great functions of sensibility, movement and intelligence, which are singly or simultaneously disturbed.

The sensory disorders consist in subjective sensations of pruritus, of numbness and of pain in different parts of the body; lastly, in temporary visual disturbances.

The pruritus is especially observed in patients whose renal lesions are dependent on generalized arterio-sclerosis, and as this latter alteration is always linked to troubles of the innervation, we may well ask if the itching is not rather the effect of the general morbid state which engenders the renal

affection than of this affection itself. These itching sensations have for their more special seat the genital organs.

Amaurosis sometimes accompanies the uræmic crisis, appearing suddenly at the onset, continuing through the attack, and disappearing with it. The vision is obscured or even almost abolished; objects appear as through a mist. It is the result of a simple functional disturbance. Diplopia, hemiopia and even hemeralopia have also been noticed.

Cophosis is also an occasional symptom of uræmic poisoning.

The *motor disorders* of uræmia are less complex than the sensory. They manifest themselves under the form of contractures, convulsions, and even of paralyses.

Contracture is relatively rare. In the majority of cases, when present, it is fugacious and associated with a transient paralysis or with eclamptic paroxysms. When isolated, it is generally localized in the muscles of the back of the neck, causing a stiffness and a slight bending backward of the head; this is frequently strongly suggestive of meningitis.

Convulsions represent the most common type of the motor disorders of uræmia. They are partial or general. Partial convulsions consist in muscular twitchings, subsultus tendinum and convulsive shocks resembling electric shocks. General convulsions strikingly resemble the epileptic seizure; they are known under the name of uræmic eclampsia, of which puerperal convulsions are the type. Uræmic eclampsia with general convulsions is exceptionally met with in interstitial nephritis linked to general atheromasia, while at the same time persons suffering from this form of nephritis form the majority of the uræmic.

Uræmic paralyses affect generally a great number of muscles, and are confined to one-half of the body (uræmic hemiplegia). They ordinarily appear in the course of nephritis dependent on arterio-sclerosis. This kind of paralysis succeeds pseudo-apopletic attack. The case is supposed to be one of cerebral hemorrhage; but if the patient dies, the autopsy discloses only atheroma of the vessels of the encephalon. When the patient survives the attack, he is found to be hemiplegic; but to the surprise of his medical attendant this "wears off" after a few days; the patient regains perfectly the use of his members! Later on there comes another attack on the same side or on the opposite side. Such pseudo-apoplectic attacks are not rare in aged persons affected with arterial nephritis. Raymond, Chantermesse and Tenneson, besides Lancereaux, have reported cases of the kind.

Other morbid sensations are those formications and pricklings of the limbs which are observed especially in arterial nephritis, and which may be due to an imperfect sanguineous irrigation. The only *articular* pains which it is possible to ascribe to uræmia are those erratic, flitting pains of the Brightic, and which yield to purging; these evidently originate in the nervous system, and not in any material disorder of the joint. To the same category belong those painful cramps of which some patients complain, and which are seated preferably in the muscles of the legs.

As for the *digitus semi-mortuus* phenomenon (the dead-finger sensation), which is by some writers ascribed to uræmia, it is a symptom common to the neuropathic and atheromatous.

Cephalalgia is an ordinary symptom of uræmic poisoning, and appears in the form of a simple headache, or of pains which bear a great resemblance to migraine. The first of these forms is continuous, with paroxysms which may come on in the daytime, but oftener supervene in the night. Moreever, nocturnal exacerbations are almost pathognomonic. The pain has for its seat sometimes the frontal region, sometimes the occipital, and reveals itself by a sensation of horrible discomfort, of weight, of pressure, rather than of painful lancinations. It is rarely located in the temporal region; oftener it occupies the entire head, and is compared to a hoop encircling and compressing the cranium, or a tight and heavy helmet.

The intensity of the headache (causing outcries), joined to the nocturnal paroxysms, reminds one of the osteocopic pains of syphilis. If in doubt, the result of treatment will sometimes clear up the difficulty; the antisyphilitic treatment (iodide of potassium, minute doses of calomel) will be found inefficacious, while a few purgative doses of Carlsbad salts will give speedy and magical relief.

The *migrainous* form is intermittent, and supervenes by crisis of a duration which varies from several hours to several days. Sometimes unilateral, it is oftener frontal. The pains are of a rending, grinding, crushing, compressing character; arterial beatings (aggravating the pains) and lancinations (so common to migraine) are rarely complained of. The pain is exceptionally accompanied with nausea and vomitings.

Vertigo is a symptom which is quite often observed in uræmia; it is not always, however, due to uræmic poisoning, being frequently dependent on a morbid state of the cerebral arteries.

Aphasia is rarely witnessed in uræmic poisoning; when supervening, it appears at irregular or periodical intervals, and is transitory.

Uræmic coma is relatively common. It is generally associated with other uræmic manifestations; it succeeds convulsions and frequently accompanies paralyses; but in some cases it remains isolated, constituting the sole disorder. There are all grades in the depth of the somnolence; sometimes the patient lies in a state of semi-consciousness for entire days, replying in monosyllables when spoken to in an earnest tone of voice. Seated in his arm-chair or lying in bed, generally a prey to a painful dyspnœa, the patient utters complaints or groans when he awakes, and speedily relapses into his hebetude.

At other times the coma comes on suddenly, and is much more pronounced. The patient is struck down with an apoplexy, and becomes insensible to all excitations; his face is pale, the pupils are immovable, the pulse is slowed, the respiration irregular sibilant or stertorous, sometimes puffing. Muscular resolution is then general, the limbs when raised fall back flaccid, as if they were paralyzed. Death may take place during a first attack. Œdema of the cerebrum is sometimes met at the autopsy, but it may be lacking; or the patient may come out of his coma, manifest some hebetude and obtusion of the intellectual faculties, but respond to questions and take nourishment; then, after a few hours, a day or two, or even several weeks, he again lapses into the same apoplectic inertia, and may have several such attacks before he dies.

The diagnosis is always difficult in cases of this kind. The absence of reflexes speaks in favor of uræmia. The examination of the urine and the state of the temperature have a great semeiological importance and a real value from the point of view of prognostic and therapeutic indications.

Uræmic madness or delirium is a rare symptomatic manifestation of renal insufficiency. When it makes its appearance it is generally in the course of interstitial nephritis, especially of that form which is dependent on arterio-sclerosis. Uræmic delirium has, however, been witnessed in scarlatinous nephritis, and it is probable that many observations of puerperal mania belong to this category.

When uræmic delirium is associated with other troubles, nervous or digestive, it is habitually mild, calm and transient, rather than noisy and persistent; hence it may pass unperceived, and generally it has but a secondary importance. If, on the contrary, this accident is the predominant phenomenon and sums up in itself all the uræmic disorders, it is more pronounced, and presents particular characters which it is absolutely necessary to know well. In fact, it is not enough that there should be delirium and a renal lesion to constitute *uræmic insanity;* this delirium should have a special behavior which distinguishes it from other forms of delirium.

Rarely it bursts forth all at once; almost always it is preceded by insomnia, change of disposition, by melancholy or by impatience, by headache or dyspnœa, or other signs of urinary insufficiency. It is active, boisterous, rather than depressive; hence its type resembles acute mania.

Hallucinations, when they exist, affect sight or hearing, and are rather terrifying than gay. The patients believe that plots are formed to injure them, to poison them, and in certain cases they refuse all food.

Uræmic delirium has remissions and paroxysms, rarely a uniform and continuous progress. It may last for months; but its duration is ordinarily shorter—a few weeks or only a few days—and, like the convulsions and coma of uræmia, it generally kills the patient unless it is met by the appropriate treatment. Patients affected with it have frequently been sent to asylums and put under restraint. This is bad practice, and may be followed by fatal results.

Uræmic delirium presents serious diagnostic difficulties, arising from the morbid predispositions which in an albuminuric patient, as in any other person, may be awakened by various exciting causes. It is conceivable that an alcoholic patient affected with renal lesion may be taken with a delirium absolutely foreign to this lesion. It is the same with an individual who has antecedents of insanity in his family; hence it is important to have clearly in mind the characters of uræmic insanity if one would arrive at a correct diagnosis. These characters may be summed up as follows: Appearance of the delirium generally after well-known uræmic phenomena; maniacal exaltation with general incoherence, which may disappear at the end of several days or end in a dementia of short duration, in

coma, or, lastly, in death. We have here, then, a grave disorder, which we should know how to diagnosticate in order to treat it properly and to avoid the disaster of committing to an asylum the unfortunate victims of this form of mental alienation.—*Jour. Nerv. and Mental Disease.*

SURGERY.

SURGICAL TREATMENT OF INTUSSUSCEPTION.

The following conclusions are reached by Dr. N. Senn, in an article in the *Canadian Practitioner:*

1. Intussusception of the bowels is a strictly surgical affection, and should be treated as such from the beginning, on the same ground as a strangulated hernia.

2. Immediately after the accident has occurred peristaltic action should be arrested by emptying the stomach by an emetic or irrigation, by suspending stomach feeding, combined with the administration of opiates in sufficient doses to procure rest for the bowel at and above the seat of invagination.

3. Prompt arrest of peristalsis procure for the affected part the most favorable conditions to arrest further invagination and to effect spontaneous or artificial reduction.

4. Artificial means to effect disinvagination should be instituted as soon as this form of intestinal obstruction is recognized or even suspected.

5. Rectal insufflation of hydrogen gas or filtered air is the most efficient and safest procedure in reducing the invagination, and, if employed sufficiently early, will prove successful in the majority of cases.

6. Inversion of the patient and complete relaxation of the abdominal muscles by the use of an anæsthetic are important factors in rendering the inflation efficient.

7. Enterostomy and colostomy, according to the seat of the invagination, are only permissible if the patient's general condition does not warrant laparotomy.

8. Laparotomy in all other cases should be done as soon as the irreducibility of the invagination has been demonstrated by rectal insufflation.

9. In acute recent cases the swelling of the intussusceptum, caused by the circular constriction at the neck of the intussuscipiens, often proves a serious obstacle to reduction, and should be removed as nearly as possible by manual compression made direct or over a large aseptic sponge before attempts are made to reduce the invagination by traction.

10. Reduction of the invagination is accomplished most readily by making traction in opposite directions upon the bowel, above the neck of the intussuscipiens, and upon the sheath below the apex of the intussusception, combined with pressure against the intussusceptum in a direction from below upwards.

11. If adhesions between the apposed serous surfaces of the inner two cylinders resist reduction, they should be carefully separated with a Kocher's director or a small pair of straight blunt-pointed scissors before traction is made.

12. After reduction has been accomplished the affected segment of the bowel should be carefully examined, and small patches of gangrene or rents of the peritoneal coat covered by stitching the peritoneum over them.

13. Recurrence of invagination is prevented most effectually by shortening the mesentery by folding it in the direction of the bowel, and fastening the fold in this position with a few catgut or fine silk sutures.

14. If the external surface of the bowel present evidences of gangrene, disinvagination should not be attempted, and in such cases a resection is absolutely indicated.

15. The resection, under such circumstances, should always include the whole intussusceptum, but only so much of the intussuscipiens as is threatened by gangrene.

16. If the continuity of the bowel cannot be restored by circular suturing, either on account of the difference in size of the lumina of the resected ends, or inflammatory softening the same object is attained in an equally satisfactory manner, and more safely, by lateral implantation or intestinal anastomosis.

17. If the invagination is not extensive, but irreducible, and the bowel presents no signs of gangrene, obstruction should be allowed to remain, and the continuity of the intestinal canal restored by making an anastomotic opening between the bowel above and below the invagination, by the use of perforated decalcified bone plates.

18. If the invagination is extensive, irreducible, and the bowel presents no indications of gangrene externally, the intussusceptum should be made accessible through an incision below the neck of the intussuscipiens and resected after securing the stump with an elastic ligature, after which the ob-

struction is permanently excluded by an intestinal anastomosis.

19. In irreducible colico-rectal invagination, or when this form of invagination has been caused by a malignant tumor, the intussusceptum should be drawn downward and removed by the operation devised by Mikulicz.

REMOVAL OF BREAST DURING HYPNOTIC SLEEP.

Dr. Schmeltz, of Nice, has recently recorded a case (*Gazette Medicale de Strasborough*) in which he removed a sarcomatous breast during an anæsthesia caused by hypnotism. The patient was a girl, æt. 20, who was easily thrown into the hypnotic state. The operation was performed in the presence of Drs. Lauza and Barriera, and the entire organ, together with the aponeurosis of the pectoralis major was removed by the oval incision. Five drainage tubes were inserted and the wound was closed with thirty-two metallic sutures. The operation lasted an hour. The patient remained absolutely insensible, in a condition of the deepest anæsthesia, such as is only seen after large doses of chloroform. Dr. Schmeltz says: "I operated very slowly and quite at my ease; the patient even tried to encourage by her words; she seemed very gay, and laughed loudly from time to time as if to show that she felt no pain. In order to make the operation easier for me, she turned herself about, so as to place herself in the most favorable position, keeping her right arm stretched out so that no assistant was required to keep it steady." She was kept under observation the rest of the day, and having been told not to feel pain and to have a good night she obeyed these instructions in the most docile manner. The wound was completely healed on the fifteenth day. The only symptom worth mentioning, which Dr. Schmeltz observed in the patient during the operation, was great pallor of the countenance, without any dilatation of the pupil or weakening of the pulse. The tumor weighed two kilograms.

THE USE OF PLATINUM INSTRUMENTS IN OPHTHALMIC SURGERY.

Gruening, of New York, in a paper contributed to the last number of the *Archives of Ophthalmology*, refers to the use of platinum instruments in ophthalmic surgery, which he regards as very advantageous. He has used for the last twelve months a set of instruments, composed of the following, a cystotome, an "iris repositor," a wire loop, a spoon, several straight and curved iris forceps, a fixation forceps, and a speculum. The platinum, alloyed, compressed by hammering, becomes very firm, and when polished is not blackened by the flame of a spirit lamp. The time, he says, required for the sterilization of a platinum instrument by imparting to it a white heat is but a small fraction of a minute, so that every instrument required for an operation can be prepared in a direct, simple, and thorough manner by the surgeon. After all, while admitting the certainty of completely sterilizing instruments by heat, a plan rendered possible by having them manufactured of platinum as suggested by the author, we are doubtful, in view of the satisfactory results which can be obtained in ophthalmic surgery, as far as suppurative processes are concerned, by the free employment of antiseptics, whether the necessity for using platinum instruments can be shown to exist.

A METHOD OF OPERATION IN POLYPI OF THE NASAL CAVITY.

Roman von Baracz, Lemberg (*Centralblatt f. Chirurgie.*) The author refers to the favorable results following the method introduced by Furneaux Jordan (*British Med. Journal*, May 2, 1885), the fundamental principle of which consists of clearing the anterior naris by means of the formation of a triangular-shaped flap from the upper lip and wing of the nose, in order to gain access to the nasal cavity. The steps of Jordan's operation are as follows: A curved bistoury is introduced beneath the upper lip at the side corresponding to the polyp, passed perpendicularly until its point emerges into the nasal opening, and the upper lip cut through from behind forward. The cut edges of the upper lip are compressed. A long and pointed bistoury is introduced into the nasal cavity and an incision made, continuous with that just described and passing out through the dorsum nasi. In this manner the soft parts of the nose are separated in a longitudinal direction. A few strokes of the knife suffice to lift the flap thus formed and permit inspection in the nasal cavity. Should the opening thus made prove insufficient for the removal of the growth, which is accomplished by the finger, aided by knife and scissors, this may be enlarged by the bone forceps.

In 1888 König (*Centralblatt f. Chirurgie*, No. 10) called attention to a method quite

similar to Jordan's. The only essential difference between the method of Jordan and that of König consists in the use of the large sharp spoon by the latter for the removal of the tumor. In B's operation a combination of the two methods is aimed at by making a formal osteo-plastic resection of the nasal bone and the nasal process of the superior maxillary bone, and the removal of the growth by means of König's sharp spoon. The operation is performed under cocaine anæsthesia. It is claimed that no deformity results, and that the cicatrix is almost invisible.

GYNÆCOLOGY.

BACKACHE AS A SYMPTOM OF LOCAL DISORDERS.

So large a proportion of the female patients who present themselves in our consulting rooms, suffering from pelvic disorders, complain of backache in the sacral region, that Dr. W. P. Manton, (*Jour. Gynæcology*) has interested himself in looking up the relation of this symptom to the conditions which physical examinations have shown to be present. At first, he attempted to arrange the results of these studies in a somewhat systematic order, but this he soon found to be quite impracticable. From a somewhat hasty scrutiny of the leading textbooks on gynæcology, he finds that but scant mention is made of backache as a symptom, some authorities ignoring it entirely, while others dismiss it with a few words. English specialists give it greater prominence than do Americans. The neglect of this symptom may be due to the fact that it is of but little practical importance, one of those minor conditions which are so frequently overlooked in our attempts to discover something new and startling. To determine the significance of backache, therefore, he took the histories of 100 cases from his case-book, omitting all conditions of the vulva, vagina and bladder, when uterine, tubal or ovarian complications were absent.

His table stands thus:

Whole number of cases	100
Of these were:	
Unmarried	17
Married	83
Of the unmarried suffering from backache were	12
Of the married suffering from backache were	60

Twenty-three more of the married women had the backache occasionally, usually at the menstrual period.

The cases of backache in the unmarried were:

Inflammatory conditions of the uterus	9
Chloro-anæmia	2
Sub-serous fibroid	1
Total	12

In the married the causes of backache were more difficult to determine, since in hardly a single instance was the local condition simple, but usually consisted of several diseased states, inseparable.

In the married there were:

Anteflexion	10 cases.
Retroflexion	8 cases.
Retroversion	6 cases.
Laceration of the cervix uteri	22 cases.
Inflammatory conditions, uterus	45 cases.
Fibroids	5 cases.
Prolapsed ovaries	8 cases.

The cases of unmarried women who had no backache were found to present the following physical conditions:

Interstitial fibroid with anteflexion and prolapsed and adherent ovaries	1 case.
Anteflexion, associated with epilepsy	1 case.
Anteflexion, with dysmenorrhœa	1 case.
Anteflexion with endometritis, anæmia and ovarian hyperæsthesia	1 case.
Right lateral anteflexion with endometritis fungosa	1 case.
Total	5 cases.

It will be observed that in those who were subject to sacral pain, there are no displacements of the uterus noted, while in those who had no pain, in all five cases, there was an anterior dislocation of the womb. That this is not invariably the rule he states he can prove by other records, in which simple, so-called congenital, anteflexion is associated with the most distressing sacral ache.

The following conditions were found affecting the married women who had no backache:

Displacements of the uterus in 6 cases, viz. anteflexion, 3; retroflexion, 2; retroversion, 1. The ovaries were prolapsed four times, inflammatory conditions of the uterus were present in 16 cases, 1 case suffered from general debility and in 4 cases there were lacerations of the cervix uteri.

By comparing this last set of cases with

the first set (married) which suffered from backache, we see that the physical conditions presented in each are essentially the same, a preponderance of the patients suffering from some inflammatory condition of the uterus, from dislocation of that organ or from lacerations of the cervix. In very many of these cases a combination of these conditions were present. A number of the patients were anæmic and several were neurasthenic.

Backache was a prominent symptom in cases where only a slight cervical catarrh was present, and absent in others where graver pathological conditions existed. From this superficial study of a limited number of local conditions associated with backache, it is quite evident that these alone are not entirely responsible for the pain, but that some other factor must be present as the determining cause. This he believes to be a nerve state dependent upon either a congestion of the pelvic viscera, more especially of the uterus, or upon an opposite state of anæmia. In the first instance the nerves of the pelvis or uterus are pressed upon by the distended blood vessels, or the uterine muscular fibers, under certain conditions, perhaps themselves taking part in the pathological states present. In anæmia the backache would only represent a phase of the general condition, a symptom of the general nerve starvation. Certain it is that in these cases a one-sided treatment almost invariably fails to afford relief, and it is only after we combine general with local treatment that we succeed in curing the patient.

He suggests that sacral backache is always a symptom of local disturbance, but that as it is a symptom common to nearly all pelvic disorders, it cannot be considered as diagnostic of any particular functional or pathological condition.

OBSTETRICS.

THE PROTECTION OF THE PERINEUM DURING THE PASSAGE OF THE SHOULDERS.

Couder (*Archives de Tocologie et de Gynécologie*, No. 7, 1891) has found it of advantage to unfold an arm when the shoulders present with folded arms after the expulsion of the head. When a hand presents before the shoulders, it should be drawn down and the arm entirely delivered. When this is not possible, the hips of the mother should be raised, and when the head has rotated externally, the head must be pulled down and the anterior arm freed to the elbow. The elbow is then to be flexed toward the back of the fœtus and the anterior arm entirely extracted. The head is then to be raised and the trunk allowed to emerge slowly.—*Amer. Jour. Med. Sci.*

DELIVERY OF THE SHOULDERS AND LACERATION OF THE PERINEUM.

Dr. Auvard (*Arch. de Tocol. et de Gynéc.*, Aug. 1891) differs from many obstetricians in his opinion as to the order in which the structures in the neighborhood of the shoulders are born, in labors where the head presents. The classical theory, at least in French schools since 1830, gives the order thus: (1) Escape of the prominence of the anterior shoulder (that which is turned towards the maternal pubes); (2) birth of the posterior or perineal shoulder and of the corresponding arm; (3) birth of the arm corresponding to the anterior shoulder. Dr. Auvard holds that the true normal order of birth, putting aside the action of great weight of the fœtus, is: (1) birth of the perineal shoulder and of the entire corresponding arm, whilst the anterior shoulder keeps fixed behind the pubes: (2) escape of the anterior shoulder and the corresponding arm. The circumference of the fœtus around its shoulders is greater than the circumference of its head, and the circumference of the fœtus around the elbows pressed against the trunk is yet greater; hence the perineum is in greater danger of laceration from the shoulders and disengaged arms than from the head. Therefore Dr. Auvard holds that in order to preserve the perineum, the arms must be disengaged before the birth of the trunk. If the hands are easily accessible, draw them down so as to bring out the corresponding arms. When neither hand can be reached, the head must be drawn aside so as to make the posterior shoulder project. The corresponding arm is next disengaged by pushing the humerus towards the back of the fœtus, and then drawing down the forearm. The anterior arm is delivered in the same way. If the posterior arm cannot be delivered first, the anterior must be brought down. In no case should the obstetrician leave the arms to be delivered pressed against the trunk, for this involves great danger to the perineum.—*Brit. Med. Jour.*

TRAUMATIC DETACHMENT OF THE PLACENTA.

Bogoroditzky (*Proceedings of the Tambow Medical Society*, Nos. 9, 10 and 11, 1890) reports the case of a healthy woman, twenty years old, in the fourth month of pregnancy, who, one night, "for amusement," threw a somersault in bed. Immediately after, she was conscious of pain in the abdomen, which moderated, and the woman fell asleep. On the next morning, however, she awoke with increased pain, a feeling of weight in the abdomen and general prostration. Soon there set in obstinate constipation (that did not yield to enemata or purgatives), violent vomiting, fever, dysuria and retention of urine. Two weeks later she appeared anæmic and collapsed; the pulse was quick and weak, the abdomen distended and tender, the uterus flabby, its fundus reaching about three fingers' breadth above the umbilicus, the cervix displaced backward, the os admitting a finger. Intra-uterine hæmorrhage being diagnosticated, hot vaginal douches were given, an ice-bag applied to the abdomen, ice, stimulants and ergot administered. At the end of four hours a dead four-months' fœtus was expelled; but the uterus remained as large as ever. On further examination, the organ was found to contain a smooth, globular body, of the consistency of the placenta. The membranes and placenta being ruptured, the finger entered an enormous cavity filled with an immense volume of fluid and clotted blood. After the removal of the membranes, clots and blood, the uterus contracted and hæmorrhage ceased. The after-treatment consisted in hot, disinfectant irrigations and the internal administration of ergot and quinine. Notwithstanding the formidable loss of blood, an excellent recovery followed. On the fourth day the temperature was normal; on the tenth day the patient got out of bed.—*Provincial Medical Journal.*

PÆDIATRICS.

HYPODERMIC INJECTION OF MERCURY IN INFANTILE SYPHILIS.

Moncorvo and Ferreira have reported in the *Revue des Maladies de l'Enfance* (T. ix, pp. 241 and 289) the results of an extended series of trials of the subcutaneous injection of mercurial salts in the treatment of infantile syphilis. The preparations used were calomel, yellow oxide, *huile grise*, salicylate, and corrosive sublimate. Of these, the *huile grise* and corrosive sublimate were found to be the most efficacious; neither gave rise to much pain at the time of injection, and there was little or no subsequent reaction. In making the injections, strict antiseptic precautions were observed. The treatment was exceedingly well tolerated, and in addition to the rapid amelioration of the cutaneous lesions and the somewhat slower disappearance of glandular enlargements, there was a very noticeable improvement in the general condition, as was evidenced by increase in weight and in the proportion of hæmoglobin in the blood. The dose of corrosive sublimate was 1 or 2 milligrammes; the ages of the children varied from 3 months to 14 years. The salt was simply dissolved in water. The dose of *huile grise* given is stated to have varied from "two-fifths to the whole of a Pravaz's syringe." The ages of the children ranged from 38 days to 12 years; the number of patients treated with the oil was 13; 5 were completely cured and 7 were much improved. The injections were repeated every third, fourth, or fifth day, according to circumstances. The authors consider that the hypodermic injection of one or other of these mercurial preparations should be a recognized form of treatment in congenital syphilis, and should be resorted to when an immediate and powerful effect is desired. [The following is the note on *huile grise* in Martindale and Westcott's *Extra Pharmacopœia*. "Injectio Hydrargyri Hypodermica.—*Syn.* Grey Oil. Mercury 3, lanolin 3, olive oil 4. Preferable formula: Mercury 39, mercurial ointment 2, vaseline oil 59. Dose, 1 to 2 grains daily."]—*Brit. Med. Jour.*

THE SUSCEPTIBILITY OF CHILDREN TO HYPNOTISM.

Berillon (*Gaz. Méd.*, July 25, 1891), has found that out of every ten children, taken indiscriminately from every class in society, eight may be put to sleep (hypnotized) at the first or second trial. But the singular part of the subject is that children who have the most marked hereditary nervous taint are the most difficult to hypnotize. It has also been demonstrated that hysterical persons are only sligtly susceptible of hypnotization, while epileptics are highly susceptible. Children without hereditary taint, who are active and vigorous, are usually hypnotized with facility. This author recommends that suggestion (hypnotization) be made use of in the treatment of such conditions as insom-

nia, night-terrors, kleptomania, onanism, and other vicious habits. If such practice is limited to ends which are strictly useful, and employed only for therapeutic purposes, it would appear free from danger and fruitful as to its results.

EYESIGHT—ITS CARE DURING INFANCY AND YOUTH.

Dr. L. Webster Fox, contributes a timely paper on this subject. In conclusion he formulates ten rules on the preservation of vision:

(1) Do not allow light to fall upon the face of a sleeping infant.

(2) Do not allow babies to gaze at a bright light.

(3) Do not send children to school before the age of ten.

(4) Do not allow children to keep their eyes too long on a near object, at any one time.

(5) Do not allow them to study much by artificial light.

(6) Do not allow them to use books with small type.

(7) Do not allow them to read in a railway carriage.

(8) Do not allow boys to smoke tobacco, especially cigarettes.

(9) Do not necessarily ascribe headaches to indigestion, the eyes may be the exciting cause.

(10) Do not allow the itinerant spectacle vendor to prescribe glasses.—(Paper read before the *Franklin Institute*, Phila.)

HYGIENE.

THE MECHANISM OF IMMUNITY FROM INFECTION.

Drs. Emmerich and Mastraum have published an interesting article in a German hygienic journal on the cause of immunity from infectious diseases and their treatment, especially of swine erysipelas, and a new method of protective vaccination for it. Emmerich published in the year 1886 his doctrine that the cause of immunity from infectious diseases is a modification of the chemical process going on in the cells, so that the new chemical compounds formed act as microbe killers without doing any harm to the cells themselves. In consequence of the results of a series of experiments, Emmerich concluded that this antibacterial poison acts destructively on all the microbes within a few hours after their introduction into the organism. The publication of this doctrine having met with a good deal of opposition, he repeated his experiments, and again arrived at the same result, showing that the explanation of immunity from infections diseases proposed in 1886 was justified. Granted the correctness of this, it follows that extracts from the tissue of any animal enjoying immunity are remedies against the corresponding infectious disease. Further experiments are now reported by Drs. Emmerich and Mastbaum which show that an extract from the various tissues and the blood of rabbits which have been made proof against swine erysipelas is an excellent remedy for the disease, and that a hypodermic injection of the extract can serve as a rational protective inoculation. A rabbit was inoculated by having injected into the posterior auricular vein the fifth of a cubic centimetre of a fresh broth culture of swine erysipelas, diluted with fifty times its volume of distilled water. In the course of the following week or two a series of hypodermic injections of the same liquid was administered. For the purpose of preparing a liquid extract suitable for therapeutic or prophylactic purposes, the organs of the rabbit were cut up and submitted to a pressure of from 300 to 400 atmospheres, and the expressed juice filtered into sterilized bottles. A large number of white mice as well as rabbits were now inoculated with the swine erysipelas, and at the same time, or very shortly afterwards, an injection of the liquid extract was administered to some of them. These remained alive, while all the others—that is to say, those which had not received an injection of the liquid extract of the organs of the infected rabbit—succumbed. Other experiments were carried out by which it was shown that this same liquid extract is capable of conferring immunity from the disease. Further experiments were made which showed that the bacilli were destroyed in six hours, and that in eight hours all were dead, or at least incapable of multiplication, but that the liquid extract produced extremely little effect upon the same baccilli outside the organism, so that the presence of living cells is evidently necessary for the destructive effect of the liquid extract to manifest itself. Another interesting result obtained was that bacilli taken fresh from the body were very much more active than their cultures in broth.—*Lancet.*

MEDICAL CHEMISTRY.

DERIVATIVES OF SALOL IN URINE.

Lacroix (*Répertoire de Pharmacie; Bull. de Thérapeut.*, 1891, cxx, 284) calls attention to the fact that patients taking salol internally or using it externally pass a urine having the property of reducing certain metallic oxides (copper, silver and bismuth) just as is the case with diabetic urine. The examination with the saccharometer can also not be depended on, the rotatory power of these salol compounds being opposed to that of glucose. The author gives an optical and a chemical method for distinguishing between the two. After treating the urine with subacetate of lead, a test tube holding 15 cc. is half filled with the same; to this is added ·05 gm. phenylhydrazin hydrochloride and ·2 gm. pure acetate of sodium. The test tube is then heated to 100° C. (212° F.) on a water-bath for half an hour. The contents are then poured into some water and allowed to cool. The precipitate formed is examined with the microscope. Glucose gives a crystalline precipitate while the salol compound gives an amorphous one. The other method is as follows: 100 cc. urine are shaken with 1 gm. sulphuric acid and about 50 cc. pure ether; it is then permitted to separate. The upper layer, containing the derivatives of salol, is evaporated, the residue dissolved in water and a few drops of perchloride of iron are added to it. This would give rise to a violet color in case salol were present. The lower layer, after separation from the ethereal solution, is treated with subacetate of lead, filtered, and the glucose then estimated in the usual manner.

EXAMINATIONS FOR ADULTERATIONS OF TOMATO PRESERVES.

Capdeville (*Bull. de Thérapeut.*, 1891, cxx, p. 277) divides the analysis into an optical or microscopical and a chemical portion. The adulterations which are looked for by the first method are carrot and pumpkin, and this is done by comparison with sections of these vegetables. The chemical method takes cognizance of the presence of coloring matters such as eosin, cochineal and grenadin. *For eosin:* 5 gm. of the preserve are treated in a test tube with a mixture of 25 cc. of distilled water, 1 cc. ammonia and 25 cc. amylic alcohol. The mixture is then filtered, and in case the filtrate is rose-colored, eosin is present which is also shown by the fluorescence. *For cochineal:* 5 gm. preserve are treated for 24 hours with 30 cc. alcohol of 95 per cent.; the liquid is then filtered and the alcohol evaporated on a water-bath. Should this residue, on treatment with ammonia, give a red color, cochineal is present. *For grenadin:* The preserve is treated with alcohol, the solution filtered and the filtrate evaporated to dryness. The residue is treated with water which dissolves the grenadin, and this aqueous solution is used for dyeing silk. Hydrochloric acid does not, while a solution of chloride of lime does, decolorize the silk even at ordinary temperatures.

NEWS AND MISELLANY.

THE POLYCLINIC COURSE OF EVENING LECTURES

Will be given on Tuesday and Friday evenings of each week, at eight o'clock, in the New Polyclinic Hospital, Lombard street, above Eighteenth street.

November 24—Dr. Edward Jackson—The Shadow Test.

November 27—Dr. B. Alex. Randall—Ear Diseases in General Practice.

December 1—Dr. S. D. Risley—The Diseases of the Choroidal Tract.

December 4—Dr. John B. Deaver—The Operative Treatment of Head Injuries.

December 8—Dr. Henry Leffmann—Recognition of Albumose and Peptone in Urine.

December 11—Dr. Edward P. Davis—The Use of the Forceps.

December 15—Dr. Henry Leffmann—Determination of Sugar and Urea in Urine.

December 18—Dr. S. D. Risley—The Diseases of the Choroidal Tract.

December 22—Dr. John B. Roberts—Fractures of the Elbow.

January 5—Dr. J. Henry C. Simes—Syphilis.

January 8—Dr. Lewis H. Adler, Jr.—The Physical Exploration of the Rectum.

January 12—Dr. Arthur Van Harlingen—The Contagious Diseases of the Skin; Their Diagnosis and Treatment.

January 15—Dr. John B. Deaver—The Radical Cure of Hernia; Umbilical, Inguinal and Femoral.

January 18—Dr. J. Henry C. Simes—Syphilis.

January 22—Dr. H. Augustus Wilson—The Mechanism of the Normal Foot with Reference to the Correction of Deformities.

January 26—Dr. Arthur Van Harlingen—The Antiseptic Treatment of Skin Diseases.

January 29—Dr. Lewis H. Adler, Jr.—Congenital Malformations of the Rectum and Anus.

February 2—Dr. E. P. Davis—The Treatment of Delayed Labor.

PERIODS OF GESTATION.

The periods of gestation are the same in the horse and ass, 11 months each; camel, 12 months; elephant, 2 years; lion, 5 months; buffalo, 12 months; cow, 9 months; sheep, 5 months; reindeer, 8 months; monkey, 7 months; bear, 6 months; sow, 4 months; dog, 9 weeks; cat, 8 weeks; rabbit, 4 weeks; guinea pig, 4 weeks; wolf, 90 to 95 days. Goose sets 30 days; swans 42 days; hens, 21 days; ducks, 28 days; pea hens and turkeys, 28 days; canaries, 14 days; pigeons, 14 days; parrots, 40 days.

DEATH IN THE JAM POT.

A correspondent of the *British Medical Journal*, in calling the attention to a danger that attends the use of glass jars for holding jam, writes: "Twice within the last two months have my children found pieces of glass in their mouths, and fortunately got it out again; one piece was half an inch long and very sharp. If this has happened twice in so short a time to me, how often must it occur to others, and how often must the children swallow a piece without knowing it? It makes one look back to the obscure case of enteritis one has met with, which could not be accounted for as to the cause. The jams my children had were from different makers, so the accident must not be uncommon."

THE COUCH.—A ROOM IS ONLY HALF FURNISHED WITHOUT ONE.

A room without a couch of some sort is only half furnished. Life is full of ups and downs, and all that saves the sanity of the mentally jaded and physically exhausted fortune fighter is the periodical good cry, and the momentary loss of consciousness on the upstairs lounge, or the old sofa in the sitting-room. There are times when so many of the things that distract us could be straightened out, and the way made clear, if one only had a long comfortable couch, on whose soft bosom he could throw himself, boots and brains, stretch his weary frame, unmindful of tidies and tapestry, close his tired eyes, relax the tension of his muscles, and give his harassed mind a chance. Ten minutes of this soothing narcotic, when the head throbs, the soul yearns for endless, dreamless, eternal rest, would make the vision clear, the nerves steady, the heart light, and the star of hope shine again.

There isn't a doubt that the longing to die is mistaken for the need of a nap. Instead of the immortality of the soul, business men and working women want regular and systematic doses of dozing—and after a mossy bank in the shade of an old oak, that succeeding Junes have converted into a tenement of song birds, there is nothing that can approach a big sofa, or a low, long couch placed in a corner, where tired nature can turn her face to the wall and sleep and doze away the gloom.—*Exchange.*

NO MORE ARTIFICIAL TEETH.

Old age is robbed of half its terrors and much of its deformity by the brilliant discovery of a Moscow dentist, Dr. Zuamensky, who, according to a possibly over-sanguine Russian contemporary, has delighted the civilized world by his skill in making teeth grow in toothless gums. After experimenting on dogs, he tried the effects of his method in human beings, and the success was complete. The teeth are made of gutta-percha, porcelain, or metal, as may be desired. The root of the false tooth has some holes bored in it. Holes are now bored into the jaw, and into the hole the false tooth is stuck as is a nail in the wood. In a short time a tender growth starts up the cavity of the false tooth, and this growth hardening, the tooth becomes fixed in position. These new teeth can, according to the inventor, be placed in the alveolus of a natural tooth, and thus, when a diseased tooth is pulled out a metal or porcelain substitute can be inserted in its place, without incurring any risk of transferring disease, as happened in Hunter's days, when the apparently sound teeth of poor persons, when transplanted, not infrequently conveyed disease. There are several minor inconsistencies in this statement, but it would be ungracious to look such a noble gift in the mouth, especially as, according to dentists of authority, our race is destined eventually to become edentulous. —*Medical Press.*

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Clinical Lecture.

THE ETIOLOGY OF CLUB-FOOT—THE TREATMENT OF CLUB-FOOT—THE PLASTER-OF-PARIS BANDAGE.

BY H. AUGUSTUS WILSON, M. D.,

CLINICAL LECTURER ON ORTHOPEDIC SURGERY IN THE JEFFERSON MEDICAL COLLEGE OF PHILADELPHIA.

Gentlemen:—I have had this baby, who was operated upon at our last meeting, brought before us to-day in order that you might see the character of the dressing employed, the condition of the foot now, and also the character of the appliance which we shall put on. I have had the plaster-of-Paris cast cut in such a way that it will be readily removed. Remember that we are simply putting the parts in a mechanical relationship so that there may result a correction of the deformity. The feet, you notice, are placed in a position of extreme eversion. The scar here is very small, the greatest amount of damage having been done beneath the cutaneous surface. Union has taken place by an exudation of plasma, which will become organized to form a new elongated tendon. But little force is required now to correct the deformity, but as soon as this force is relaxed, the deformity returns. Therefore is indicated the adoption of a form of treatment which will hold the feet in the corrected position. Subsequently, then, to the operation, comes in maintenance of the corrected position and finally the treatment proper of the deformity.

Time did not permit me to operate upon this second patient before you last week, but I performed the operation immediately after the hour, and bring him before you now that you may see the two patients together. You will see here also that when this plaster-of-Paris cast is removed from the foot, the latter immediately returns to its former position. Just here there is one point I would have you bear in mind. You will observe in those children who have normal feet, a position of *varus* which they assume when at rest. You must keep in mind the fact that the position of repose is that in which the foot is slightly inverted.

ETIOLOGY OF CLUB-FOOT.

Since my last lecture I have been asked several very pertinent questions which I have felt called upon to answer publicly rather than individually. One of these is, What produces these congenital deformities, or why do some children present the deformity, and others in the same family not? More time, probably, has been spent upon the study of the etiology of congenital club-foot than upon that of any other subject in orthopedic surgery. I will endeavor to place concisely before you the various theories which have been advanced, notably by our German confréres, to explain the origin of the condition. Among these theories is that of *heredity*. It is well-known that a child inherits certain traces and peculiarities from its parents. A father or mother with a defective part of his or her body, may have a child with a similar defect, or a parent with a constitutional taint of consumption or syphilis will give to the child a similar disease. In my practice, however, over thirteen years now, I know of but one case in which there was an hereditary club-foot, the child inheriting the deformity from its father, and here is a suggestion worthy of remembrance, namely, that it is stated as a result of investigation in nearly all cases where the club-foot is inherited, it comes from the father. This theory, therefore, is proved to be an unimportant one, since so very small a number of cases may be explained by it. Equally unimportant is the theory of *maternal influence* or impression. When a mother cannot explain satisfactorily a condition in her infant in any other way,

she will go back to her period of gestation and recall some influence which she can bring to bear upon the production of the deformity. Thus nævi are frequently referred by the mother to seeing some object which in a general way resembled the appearance of the nævi or some other equally improbable occurrence. Another theory which approaches nearer to the truth and is more satisfactory in its explanation, is that of *mechanical intra-uterine pressure*—pressure exerted in intra-uterine life. If we can think of a condition in which there is a pressure being brought to bear upon the fœtus, as for instance when there is insufficient liquor amnii we can conceive of the possibility of the feet being held in this position so long as to result in the deformity. This theory will explain the formation of *varus* and *calcaneum*, but I do not think it will explain the other forms which are encountered. Another theory, is that which is known as the *musculo-nervous* theory, because it claims there is some central lesion of the brain or cord, whereby the muscles of the extremities are paralyzed, resulting in the deformity. This does not cover the large number of cases, however, in which there is no paralysis or atrophy of the muscles to be found.

The theory of *arrested development*, I believe, is the only theory by which we can explain the etiology of the condition. By arrested development we may explain not merely the various orthopedic conditions, but the various other congenital defects and anomalies, such as the case that I discharged from the hospital yesterday, who had congenital club-feet, club-hands, and defective knee-joints. Club-foot is frequently associated with spina-bifida, club-hand, webbed fingers, hydrocephalus and other evidences of some arrest of development. This theory is the most satisfactory because it will not entangle you with the other theories with which you will be brought in contact in considering the other deformities of the body. Those who advocate the musculo-nervous theory, found their belief upon false grounds. I cannot believe that the atrophy which exists in adult life in many of these conditions has preëxisted to the deformity, but I do believe that it has followed it as the result of the deformity. This urges me to impress upon you the possibility of producing deformity in the efforts made to correct an existing deformity. If we take a foot in which there is a *varus*, and so bind it to completely restrain muscular action that it becomes a mass of immobility, as in the case of a Chinese lady's foot, we are producing a condition of atrophy of the muscles which may result in a deformity.

In this boy, who I now bring before you, you see applied in another form, a means of mechanical restraint. This apparatus is doing here what was done in the other cases by the plaster-of-Paris splints, but has, however, a possibility of motion, while the other exerted an absolute restraining power. There are a large number of cases of so-called acquired *varus*, developing after birth. The argument advanced in these cases, is that if paralysis will produce *varus* after birth, why not apply the musculo-nervous theory to the prenatal cases. This child will illustrate the condition found in a great many cases of corrected club-foot. There is danger of atrophy from misuse. You notice the diminished calf on one side, and the shortened, narrowed foot. On measuring the ankles from the fixed points of the malleoli I find there is an atrophy of the bones also. If this atrophy has been produced by the central lesion which caused the club-foot it will be a much more difficult condition to treat; if, however, it is due to our means of mechanical restraint, we will be able to correct it, and improve the muscular development of the limb. The other leg develops more rapidly, chiefly because it is free from any form of restraint. I have now very briefly indicated the etiology and will now endeavor to lay down a principle upon which to base

THE TREATMENT OF CLUB-FOOT.

I shall ask you to divide all of these cases, following an arbitrary division, into three grades. The *first* grade will include all cases of congenital *varus* in which the deformity is easily corrected without operation, the foot readily placed in a proper position, and readily maintained in this position. Naturally, the *second* grade is a degree beyond this, where the deformity is corrected with difficulty, and the corrected position is maintained with difficulty. The *third* grade includes those cases where the foot is so firmly fixed in the deformed position that it cannot be corrected at all, that is, without the intervention of surgical or mechanical measures. If we accept these three grades we shall be prepared to take the next step and apply the treatment. This, likewise, is divided into three positions: first, the correction; second, the maintenance of the corrected position; and, third, the application of measures to restore the normal mechanical action of the foot. On the ear-

liest possible moment at which you correct the deformity will depend the ultimate success of the operation. After this, the subsequent treatment will consist in the application of such forms of manipulations, electricity and gymnastic exercise as will develop the muscles of the limb.

PLASTER-OF-PARIS BANDAGE.

I have shown you one form of operation, I will now show you one form of maintenance apparatus. One of the most important adjuvants of the orthopedic surgeon is the plaster-of-Paris bandage, but I would impress upon you the fact that you do not employ the plaster-of-Paris for any therapeutic action it may have but solely as a mechanical agent. Often have I seen a plaster-of-Paris bandage worn by a patient for a long time after it has become broken and useless with the apparent idea that it was keeping away the disease. In the preparation of the plaster-of-Paris bandage it is well to remember first the material you are going to use. If we use the ordinary surgical roller bandage made of unbleached muslin we will encounter two serious objections. In the first place its meshes are so close that we cannot get sufficient plaster-of-Paris into it; and in the second place, it is non-absorbent. We may place a surgical bandage in water for some time and it will not absorb any. A material which I am very fond of using is a form of cheese-cloth from which the sizing has been removed. It has, as you see, wide meshes. Ordinary cheese-cloth is yellow, being unbleached, and if we attempt to use it we will find that it is non-absorbent. The material I use is called butter-cloth, and has been passed through a process which has removed the sizing so that it readily absorbs the water from the plaster. Butter-cloth is even preferable to crinoline, which is somewhat stiffer and hence unpliable. There are all sorts of ways of preparing a plaster-of-Paris bandage but I will show you only the method resorted to here. The butter-cloth comes in fifty yard pieces, one yard wide. With an ordinary carving knife a bandage of the proper width is cut off the end of the piece as it comes from the store. We have adopted in this Hospital a method of rolling the bandage by means of a box of small size, which I devised some years ago and it possesses the advantage of simplicity. Resting on the edges of the box, at one extremity is a movable diaphragm, and on this, by means of a spring, is arranged what is called, for want of a better name a "distributor." This holds the bandage down and smears in the plaster as the bandage passes under it. At the other extremity of the box is a crank-pin attached, and around this the bandage is rolled. The plaster-of-Paris is then placed on the top of the diaphragm in a sufficient quantity and the crank-pin being turned, the bandage is rolled with its meshes filled with the plaster. It is not essential that the bandage should look pretty. The shop-bandages are nice to look at, but are not as efficacious as these which are roughly made, the real beauty consists of its utility and not its appearance. A plaster-of-Paris bandage spoils from being kept, because the gypsum possesses hygroscopic properties and will absorb water readily from the atmosphere. We can avoid this by wrapping the bandage in waxed paper, which will keep it for a long time without any damage whatever. In using these bandages two points of great importance must be borne in mind. The first is to have salt ready, and the second is to have something to cover the part of the patient upon which the bandage is to be placed. The use of salt is essential as a hardening process and is used in the water in which the bandage is to be soaked. The time occupied for the setting of the bandage should not exceed that of the time of application. If we use hot water the setting takes place far more quickly, but its use tends to make the plaster brittle and less durable. If you apply the bandage directly to the skin the hair will be caught and the patient will suffer as a consequence and any bony prominences are apt to cause abrasions of the skin covering. Plaster-of-Paris contracts in cooling, and if the bandage be applied too tightly it will constrict the parts and may produce sloughing. If some covering for the skin is used, all this may be prevented and I have found that for this purpose a prepared lint best answers the purpose. It absorbs the moisture from the inner side of the plaster-of-Paris bandage and thus makes it set more quickly. In conclusion, one point must be remembered, and that is, never cover an entire extremity in applying one of these bandages. If you are bandaging a foot leave the toes uncovered so that you may see whether or not too much pressure is being exerted. You can then have an indicator constantly before you and the nurse. Any tendency to constriction manifested by imperfect circulation would be sufficient reason for the removal of the fixed dressing and its reapplication.

TOOTHACHE may be relieved by naphthalin, 5 grains, dissolved in chloroform, 1 dram.

COMMUNICATIONS.

FURTHER CONTRIBUTIONS UPON TUBERCULIN.*

BY PROF. R. KOCH,

BERLIN.

(Translated by Henry T. Brooks, M. D., and Wm. Vissimann, M. D.)

Since I introduced the substance known as tuberculin to the world, many experiments have been made to isolate the active principles contained in it, and to free it from other matters to which it was believed disturbing extraneous actions were to be attributed. For some time past I have also busied myself with similar experiments and will state the results which I obtained in the following report. As yet only preliminary contributions upon the work belonging here are at my command, and, according to my own researches, the question appears to me not yet ripe for discussion. I shall confine myself to a description of my own observations, and leave the elucidation of casual contradictions and the discussion of the results obtained by other observers to a later time.

A few experiments showed that the active principles of tuberculin did not belong to the alkaloid ptomain groups, but that it is a substance closely allied to the albuminous bodies, and it was questionable whether it would bear the manipulations usually employed in isolating such substances without being changed in its composition. I, therefore, so proceeded that after every chemical reaction, I tried the action of the product on the animal organism in order to convince myself whether the active principle itself was still present and, if this was the case, whether a complete or partial separation had been produced. Without a control following the researches step and step, one very easily loses the thread and falls into error.

Since in this case almost everything depends upon experiments on animals and upon the proper interpretation of the same, it will be necessary to go into the details of these more closely. Healthy guinea pigs, as I have already shown, may be given very large quantities of tuberculin without any particular action. These are, therefore, not to be used as a medium for testing its active principles. Tuberculous guinea pigs, on the other hand, react in a characteristic manner after comparatively small doses. However, it is not sufficient to inject just enough tuberculin into the animals to cause them to react in a manner in which we are accustomed to see tuberculous persons react, for the temperature exacerbations and the local symptoms in a guinea pig are not sufficiently marked to permit of a certain opinion of the action of a single tuberculin injection. There remains nothing except to give the animal a large enough dose to kill it. In guinea pigs which are tuberculous in a high degree, *i. e.* 8 or 10 weeks after inoculation, 0.01 gram of tuberculin is very often enough for this purpose. In animals with less advanced tuberculosis, 4 or 5 weeks after inoculation, a dose of from 0.2–0.3 gram is usually required. A dose of 0.5 gram kills without exception. Now, if we take animals that have been inoculated at least 4 weeks and inject 0.5 gram of tuberculin, or a corresponding amount of the substance obtained from the tuberculin, which is to be tried as to its effect, then we can conclude as to the presence or absence of the active substance accordingly as the animal dies or lives. Here we have an infallible reagent which, in several hundred experiments, has not up to the present time disappointed me in a single instance.

Further, the phenomena under which the tuberculous animals killed with tuberculin, die, are so characteristic that they cannot well be mistaken for those arising from an accidental cause of death. The animal dies according to the degree of tuberculosis, in from 6–30 hours. If death takes place sooner or later it cannot be positively attributed to the action of tuberculin. In my experiments I could show in all of these cases that death was caused by pneumonia, malignant œdema and other infectious diseases.

On the cadaver of a tuberculous guinea pig killed by tuberculin the following changes are found. On turning back the abdominal walls, the place of injection is very much reddened by the injections of the vessels; it often has a dark, almost violet color. This redness spreads out more or less into the surrounding tissues. The lymphatic glands in the neighborhood of the inoculation-point are very much reddened. The surfaces of the liver and spleen show, beside the tuberculous changes, spots up to the size of a hemp-seed which are deeply reddened and look exactly like ecchymoses which are found in many infectious diseases. Microscopical examinations of these points show that they

* From the *Deutsche Medicinische Wochenschrift*, No. 43, Oct. 22d, 1891.

are not extravasations of blood but are due to enormous dilatation of the capillaries in the neighborhood of tuberculosis patches. The capillaries are packed so full with red blood corpuscles as to give the appearance as though the blood current had come to a complete stand-still at this point. Only in exceptional cases did we find a rupture of the vessels and a hæmorrhage into the tissue. Like changes are found in the lungs, but they are not so marked or so constant. The small intestine is often strongly and evenly reddened. The symptom which never fails and which is really pathognomonic, is the hæmorrhage-like spots on the surface of the liver. They are best seen in animals with tuberculosis 4 or 5 weeks old, whose livers show numerous grey nodules which have not taken on that peculiar, well known yellow and brown marbleized appearance as a result of distributed necrosis. If one has seen the above described changes, a few times, there will scarcely be any doubt whether the tuberculin action is present or not.

My first experiments for isolating the active principles of tuberculin were made with alcohol.

If the tuberculin is mixed with five times its volume of absolute alcohol, a brown rosin-like mass is separated out which adheres tightly to the bottom of the vessel. The brown mass, as well as the fluid above it, which can be poured off clear, show on testing, about the same strength of action as tuberculin. Therefore, a separation in this manner cannot be brought about.

If alcohol in excess is added we obtain, in place of the rosin-like mass, a fine, granular precipitate, which, on repeated washing with absolute alcohol and collecting on a hard filter and then drying in a vacuum over sulphuric acid, produces an almost white powder. In order to obtain this precipitate it is advisable to proceed as follows: The tuberculin is slowly dropped in 20–25 times its volume of absolute alcohol under constant agitation. After the precipitate has settled, the alcohol is poured off and the same amount of fresh alcohol is added. This is to be repeated several times and then the precipitate is dried in the described manner above. If we try to dry the precipitate wet with alcohol, warming on a water-bath, it runs together and becomes brown, while in a vacuum exsiccator it dries to a white, spongy mass which can be easily crushed to a powder. Tuberculin yields about 10 per cent. of a dry powder on treatment with absolute alcohol. The latter, however, is by no means, the active principle in a pure state, for it contains besides a number of extractive substances not soluble in alcohol. It is not possible to precipitate all of the active principles out of the tuberculin with alcohol absolutus. For, if the filtered alcohol be evaporated, a clear, yellow fluid remains which consists of the glycerin and the substances dissolved in it. Half a gramme of this fluid is not enough to kill an animal, yet in one experiment death followed the injection of 1.0 gramme, and in another 1.5 grammes.

Even if all of the active principle cannot be obtained by precipitation with alcohol, still a number of inactive substances can be removed in this manner and above all the glycerine, which has a great influence on the solubility of the substances contained in tuberculin.

It was necessary to bring about a separation of the mixture of substances in the alcoholic precipitate. With the help of Mr. Proskauer and Prof. Brieger, pretty much all of the methods in question were tried for this purpose. Of these I will only specially mention the following: Treatment with ammonium sulph., magnesium sulph., calcium carb., baryt., phosphomolyb. acid., phosphotungst. acid., ferrum acetat., plumb. acetat., tannin, animal charcoal. But none of these methods were successful. Either the active principle was contaminated with too many other substances, as in the case of ammonium sulph., or it lost the action altogether, or it could not be separated from the precipitating substance in an active form. For instance, with tannin all of the active principles could be precipitated and the precipitate, brought into solution through addition of sodium carb., still possessed all of its effectiveness, but we were not able to separate the active substance from the tannin. Perhaps, in spite of these obstacles, these experiments, if continued far enough, would have led to results, had we not succeeded in nearly accomplishing our end in another way, whereby the former methods were pushed into the background for the time being. I observed that, if the alcohol was mixed with tuberculin in a very much less proportion than in the former experiments, *i. e.* in proportion of about 2:3, the rosin-like mass was not separated, but that a white flocculent precipitate formed which readily subsided and, by washings with alcohol of equal concentration, could be easily purified [reinigen]. In these experiments a part of tuberculin (e.g. 10 c.c.) is poured into a beaker glass and under agitation 1½ times

of volume, or 15 c.c. of alcohol is added; the glass is covered and allowed to stand 24 hours. By this time a flocculent sediment forms on the bottom of the glass in the dark brown fluid. The supernatant liquid is carefully poured off and an equal volume of 60 per cent. alcohol is added; it is again stirred up and then allowed to settle. This is repeated (about 3 or 4 times) until the alcohol above the sediment is almost colorless when it is washed several times in absolute alcohol in the same way (generally three times is enough), the sediment is placed on a filter and dried and then put into a vacuum exsiccator where it is freed of all moisture. It then produces a snow-white mass which, after drying at 100° C. (whereby it loses 79 per cent. of water) has, in the powdered state, a light grey color. Small quantities of the precipitate may be freed of its alcohol on a water bath, without its appearance being changed, as was the case with the impure precipitate obtained with 100 per cent. alcohol.

This precipitate formed with 60 per cent. alcohol surpasses all substances produced in other ways from tuberculin so much in efficacy and is so constant in all the reactions made with it up to the present, that we can look upon it as nearly pure; perhaps it is in reality the perfectly isolated active principles of tuberculin. While at least 50 mg. of the precipitate obtained with 100 per cent. alcohol is required to produce the same effect as 0.5 gramme of tuberculin, 10 mg. of the precipitate formed with 60 per cent. alcohol is sufficient; in several experiments the animals died after injection of 5 mg. from marked tuberculin action, indeed in one case death ensued after 2 mg. The yield is about 1 per cent.† If we compare the effect of the amount yielded with the effect of the amount of tuberculin used we find that scarcely one-half of the active principle has been precipitated from the tuberculin with 60 per cent. alcohol, and this agrees with the examination of the filtrate which, after freeing it of alcohol and adding water to the original volume, produces death of tuberculous animals in doses of from 0.75 to 1.0 gramme.

The 60 per cent. precipitate, which has been termed pure tuberculin, has the following properties:

† The yield may be increased by adding more alcohol to the tuberculin, e.g. 65–70 per cent. Then not only large quantities of the active principle are precipitated but also other matters are thrown down and an impure product is the result.

It dissolves in water easily, easiest when rubbed in a mortar with water. This kind of solution does not retain its efficacy very long, for it has been repeatedly observed that after standing one or two weeks it had lost considerable in action. Evaporation seems to affect the watery solution considerably, but it suffers less at the beginning, if sufficient fluid is still present, than towards the end of evaporation when it becomes quite concentrated; then coagula-like flakes separate from it, which do not dissolve on addition of water. A specimen of the precipitate which had been repeatedly dissolved and evaporated to dryness on a water-bath had finally lost its action altogether. After protracted standing and drying at a high temperature, purified tuberculin becomes partially insoluble. At first, I assumed that the insoluble constituents were foreign substances mixed with the tuberculin which could be separated by cautious heating with dry heat, hot steam, etc. Even after it was proven that the insoluble substances (if they had not been altered by repeated heating) had the same action as tuberculin itself, it was still probable that they were coagulated albuminous bodies which had taken part of the active principle with them during precipitation. As we were not able to separate the active principle either by the addition of other albuminous substances, which had been added to the watery solution of tuberculin and then coagulated, nor by the addition of other precipitable substances, this view had to be abandoned. Since the questionable substance has the same action as tuberculin, I am inclined to consider it as a modification of tuberculin, insoluble in water.

If the pure tuberculin is not very carefully produced and preserved it always contains a small quantity of this insoluble substance, and we do not receive a clear fluid by dissolving it. The addition of a small quantity of sodium carb. until distinct alkalinity is generally sufficient to cause everything to dissolve.

Solutions of pure tuberculin in 50 per cent. glycerin are, on the other hand, quite permanent. A solution which I have had for four months has remained unchanged in its efficacy. If the solutions contain a small per cent. of glycerin they may be repeatedly evaporated and dissolved without detriment, and when they contain a large amount they will bear very high temperatures. Several experiments were made in which it was exposed to a temperature of 130° C. and 160° C. for hours without observable diminu-

tion in its activity occurring.‡ Glycerin, therefore plays an important role in the preservation of tuberculin.

If we carefully prepare a concentrated solution of tuberculin and pour a few c. c. of it into absolute alcohol, a precipitate does not appear as soon as we should expect, but a very weak opalescence takes place. The alcohol may now stand for weeks without changing its appearance or without a precipitate forming. Purified tuberculin is, therefore, not altogether insoluble. 80 per cent. alcohol will take up considerable quantities and 60 per cent. alcohol will take up large quantities. Now, how does it come that tuberculin may be precipitated from the crude fluid by alcohol? This problem is very easily solved in that the alcohol containing the tuberculin had received all the constituents of the crude fluid. The addition of glycerin permitted no precipitation. The extractive substances formed a precipitate, but after these had settled, the alcohol still retained its opalescent appearance. Only after the addition of salts did the tuberculin form flakes and separate completely as a precipitate. Of the salts sodium chloride proved to be the best precipitant for tuberculin in alcohol. One drop of a concentrated solution of sodium chloride is sufficient to precipitate the tuberculin in several hundred c.c. of alcohol. This relation of tuberculin to dilute alcohol is to be considered in its purification. As soon as the mineral salts which favor the precipitation of tuberculin are removed by washing with 60 per cent. alcohol the latter begins to become opalescent *i.e.*, it begins to dissolve the tuberculin, and in this way large quantities are lost. If this takes place, the alcohol must be cleared by the addition of sodium chloride and for further washing absolute alcohol employed.

Of the chemical reactions which characterize tuberculin, the following may be mentioned:

First, it produces all albuminous reactions, the biuret reaction, Adamkiewicz's reaction (glacial acetic acid and concentrated sulphuric acid), with Millon's reaction a white precipitate forms which becomes reddish on warming, etc. Phosphotungsten. acid, acetate of iron, ammonium sulph., and tannic acid completely precipitate tuberculin out of its solution; also plumb. acetate produces strong cloudiness but no complete precipitation. Glacial acetic acid also produces at first a strong cloudiness and even a slight precipitate in the watery solution of purified tuberculin, but these disappear on further addition. The substance precipitated by acetic acid showed neither more nor less efficacy than the pure tuberculin, and appears to be very much like the modification which is insoluble in water and may be identical with it. Aqueous picric acid causes a flocculent precipitate which chars upon heating but reappears on cooling. Dilute HCl, and H_2SO_4 produce no precipitate. These acids have the same action in the concentrated form. HNO_3 on the other hand produces a precipitate that increases on standing; by boiling it becomes yellow and on addition of caustic soda becomes brownish-red (xanthoproteic reaction).

Ash analyses and elementary analyses of purified tuberculin were made by Mr. Proskauer and Brieger and were as follows:

1. Ash analyses:

I. Ash from 0.4816 gramme of substance (dried at 100°c.) 0.0802 gramme=16.65 per cent. (Brieger).

II. Ash from 0.1410 gramme of substance (dried at 100°c) 0.0265 gramme=18.46 per cent. (Proskauer).

III. Ash from 0.1740 gramme of substance (dried in vacuum) 0.0350 gramme=20.46 per cent. (Proskauer).

The preparations I and II I made, each being obtained from 500 c.c. of crude tuberculin. Preparation III was made by Mr. Proskauer from 300 c.c. (washed 3 times in 60 per cent. alcohol, 4 times in 70 per cent. alcohol, 3 times each in 80 per cent. and 90 per cent. alcohol and 5 times with absolute alcohol, the latter displaced by ether and then dried). The ash consisted almost exclusively of potassium and magnesium phosphates and contained no chloride. The ash of sample II contained 59.84 per cent. of phosphoric acid.

2. Elementary analyses (calculated for substances free of ash):

	1. Brieger	2. Proskauer	3. Proskauer
Carbon.....	47.02%	48.13%	47.67%
Hydrogen.....	7.55%	7.07%	7.18%
Oxygen.....	14.45%	14.46%	14.73%
Sulphur.....	——-	1.17%	1.14%

For the elementary analyses the same preparations were used as for the ash analyses.

‡Prof. Pfuhl made several experiments at the same time: 1—crude tuberculin, 2—watery solution of tuberculin, 3—50 per cent. glycerin solution of purified tuberculin were exposed to a temperature of 160° C. for 2 hours and then corresponding quantities of each injected into tuberculous animals. The animal which had received the watery solution alone remained alive; both the others injected with the crude and purified tuberculin respectively died, and showed pronounced tuberculin action.

If we take all of the described properties of purified tuberculin into consideration we must assume that it belongs to the group of albuminoids. The high ash contents and the irregular course of a few reactions (plumb. acetate and glacial acetic acid) lead us to believe that the substance had not been obtained wholly pure, but that other matters, though in small amount, may be present and consist perhaps of traces of albuminous and mineral bodies similar to tuberculin, which, as far as the therapeutic value of the preparation is concerned, have no significance. Although tuberculin appears to be closely allied to the albumins, still it is distinguished from these and especially from the so-called toxalbumines, through its behavior toward high temperatures. It also differs from the peptones in many particulars, namely through its preciptability with ferrum acetate.

It is not improbable, that by further research in the field of the products of pathogenic bacteria still other substances will be found which will permit of this classification into a special group of albuminous bodies.

In the chemical examination of tuberculin the trials of the purified substance in regard to its physiological action were confined to experiments upon tuberculous guinea pigs. After we had succeeded as far as possible in isolating the active substance, it was naturally of great interest to learn how it acted upon man, *i. e.*, if the desired therapeutic effects of crude tuberculin took place in the use of purified tuberculin with the absence of all disturbing extraneous action.

For this purpose experiments were first made on healthy subjects and, indeed, on physicians who kindly presented themselves for the trials.

Dr. Kitarate received on June 24th, 1891, at 12 m. an injection of 2 mg. At the time of injection the temperature was 36.5°. It rose at 8 p. m. to 38.3°, remained until 11 p. m. at 38.2 and then fell quite rapidly. At 4 p. m. coughing set in which lasted for 3 hours. Then followed headache, languor and sweating. Otherwise the general condition was undisturbed. (Pulse rose from 72 to 92).

Dr. A. Wassermann received on June 25th an injection of 3 mg. The temperature rose in the course of 11 hours from 37.2° to 38.7°, then fell to normal. At the beginning of the reaction tenderness and a sensation of drawing were observed in the breast and abdominal muscles; also heat and dulness in the head, no chill. (Pulse rose from 80 to 114).

Dr. H. Maass, July 13, 4 mg. Temperature rose in the course of 12 hours, from 37.0° to 39.0°. The subjective disturbances consisted of slight chill and later, fever, languor and headache. (Pulse rose from 72 to 100).

Director Dr. P. Guttmann, July 28th, 5 mg. Temperature rose from 36.5° to 39.2° within 8 hours. Four hours after the injection increasing drawing in of the limbs, after a further 2 hours' chill he was forced to take to bed. Then followed fever and sweating. No headache but vomiting of gastric mucus (for sake of precaution very little food was taken). Also complete sleeplessness. (Pulse went as high as 135).

In all of these cases the patients had either wholly or nearly recovered after 24 hours.

The temperature rise corresponds exactly to the amount used in each dose:

2 mg.	gave	38.2°	maximal	temperature
3 "	"	38.7°	"	"
4 "	"	39.0°	"	"
5 "	"	39.2°	"	"

But the subjective symptoms also kept equal pace with the temperature, and all the known disturbances occurring after injections of crude tuberculin again showed themselves, so that a difference between the purified and unpurified preparation in this respect could not be observed. This was especially the case in one example which differed from the cases just described and, therefore, deserves special mention:

Mr. O. Wassermann of strong physique and without demonstrable evidence of tuberculosis, received on July 27th, 4 mg. of the purified preparation. The temperature rose from 36.9° within 10 hours to 39.5° then fell to 38.4, again rose to 40.2° 27 hours after injection. During the first rise of temperature the subjective disturbances remained within medium boundaries, so that he could take a walk. Shortly before the second rise of temperature a chill occurred, the pulse reached 140, was small and irregular, so that excitants (alcoholics) appeared necessary. Pulse and temperature only returned to normal after the lapse of 48 hours.

If in this case a suspicion of tuberculosis, for which a few symptoms point, or the restless condition of Mr. Wassermann can give the explanation for the irregular and violent reaction, must remain undetermined. This observation, however, undoubtedly teaches that purified tuberculin can, through a too strong reaction, bring about grave symptoms.

With correspondingly small doses and in a cautious manner, we made extensive researches with purified tuberculin upon tuberculous patients in the Moabit Hospital,

who were treated for months partly with pure tuberculin alone and partly in alternation with crude tuberculin. In short, these experiments lead to the conclusion that there was no essential difference in action between the purified and crude tuberculin. The first has the same diagnostic and therapeutic value as the latter, if it is used in such doses that the reaction phenomena, *i. e.*, the temperature, which is the safest guide, reach the same height. While it was observed that the purified tuberculin was, for guinea pigs, 50 times as strong as the crude, for man it was found, at the highest estimate, to be only 40 times as strong.

As regards the dosage the purified tuberculin possesses no advantage. For its effect cannot be gauged on the ground of chemical reactions any more than that of the crude, but must be determined by experiment on the animal organism, and the dose of both remedies is, in every case, to be measured to correspond with the conditions at the bedside, which would not be altered if the action of the purified tuberculin was absolutely uniform.

If the purified tuberculin is any more stable than the crude or not, further experience alone can tell. Up to the present time, crude tuberculin has shown itself to be very permanent in a solution rich in glycerin. At least I have not been able to notice a diminution in the efficacy of the oldest specimens of tuberculin at my disposal.

Interesting and important as the efforts to produce the pure active principle may be from a theoretical point of view they have made no practical advance; but this shall not deter me from pursuing these questions still further.

THE METHOD OF PREPARING TUBERCULIN.

In my last publication upon tuberculin I gave enough as to its origin and preparation to enable a competent person to follow my methods. The announcement that tuberculin is contained in the tubercle bacillus cultures, and that the presence of the same can be demonstrated at all times by experiments on tuberculous guinea pigs, and that the experiments to obtain the active principle from the cultures can always be controlled by inoculation on animals, should have sufficed to enable a skilled bacteriologist to obtain tuberculin or a similar substance. If, in spite of this, only a few bacteriologists have approached the task and, as I am able to judge from the heterogeneous mass of literature, have only partially solved it, still a certain amount of shame rests on the bacteriologists of the day who, instead of independently investigating for themselves, boisterously clamor for a receipe for preparing tuberculin. It is questionable to me if the method which I employ is the best or not. In the course of time I have continually improved it and hold that it can still be improved, and hope that an altogether different and better method may be found. If now, when the judgment of the tuberculin question has become quieter and more objective, I deem the time ripe for the publication of my methods of preparation, I should very much regret it, should others slavishly adhere to my rules and not try to produce something better.

I would further remark that the difficult point in the preparation of tuberculin lies in understanding how to cultivate tubercle bacilli in large quantities. Without extensive cultures, the preparation of tuberculin in any quantity is altogether out of the question. Skilled bacteriologists alone can cultivate tubercle bacilli in large quantity; the unskilled will also be able to produce large, but not pure cultures; with impure cultures he can only do mischief and he had, therefore, better keep his hands off.

Originally, I cultivated the tubercle bacillus on glycerin peptone-agar in test-tubes; after the cultures had reached full development, I washed them off, gathered them on a fine wire sieve, poured a 4 per cent. glycerin solution over them, evaporated to $\frac{1}{10}$ of the mass with this solution, filtered off and thus used the filtrate. The cultivation on agar in test-tubes is very tedious and the yield is comparatively small. As it was necessary to have large quantities, larger vessels had to be used for the cultures. Here there was difficulty in using the nutrient agar, and I went back to old experiments which I had made in cultivating the tubercle bacillus in a fluid nutrient medium. In the beginning the cultivation was not very satisfactory; they grew very slowly and poorly in the liquid. By chance I observed that certain flat pieces of the culture, which remained dry on the upper surface, floated on the surface of the liquid and developed in a most luxuriant manner. They formed in the course of a few weeks a pretty thick skin, above dry, and often folded, of a whitish color, which completely covered the surface of the liquid. After 6 to 8 weeks the growth is at an end; the skin then begins to imbibe the fluid and, finally, falls to the bottom in

ragged flakes. The yield of such a culture is much greater than that obtained upon a solid nutrient medium.

As a culture fluid, an infusion of veal, prepared in the ordinary way, can be used. It must be of a weak alkaline reaction and have the addition of one per cent. pepton and 4 to 5 per cent. of glycerin. Instead of the veal infusion, a one per cent. meat extract solution can also be used.

A bulb-glass with a flat bottom is the best culture vessel. They should be half filled, say with from 30 to 50 c.c. of the fluid and well sterilized, and then so inoculated that not too small pieces of the seed culture float upon the surface of the liquid. The cultures are best kept at 38° C.

In regard to the origin of the tubercle bacilli used in the cultures I have found no difference. It is immaterial as to the efficacy of the tuberculin whether the bacilli are taken from first cultures or from those several years old; likewise whether the cultures are derived directly from tuberculous persons or from those which have been several times passed through the animal body.

In this method of cultivation, part of the active principle goes into the nutrient fluid, which can be easily proven by injecting it into tuberculous guinea pigs. Therefore, after I had noticed this I no longer used a watery solution of glycerin, but extracted the nutrient medium with the tubercle cultures in order to also obtain in this way the active principle contained in it. That the cultures have been sufficiently extracted is proven by the fact that they are only capable of producing a very slight effect on tubercular guinea pigs and that the culture fluid, when evaporated without the cultures, produces a very much weakened tuberculin.

The cultures used for this extraction must be perfectly ripe, *i. e.*, 6 or 8 weeks old. They must, as a matter of course, be absolutely pure, of which we must convince ourselves by microscopic examination of each vessel. Only after long practice will we be in a position to judge of the absence of contamination through foreign micro-organisms without this examination, which as is well known, is far more difficult in a fluid than in a solid medium.

The cultures that have been found to be perfectly pure are to be evaporated to $\frac{1}{10}$ of their original volume, in a suitable vessel, on a water-bath. Since they are hereby exposed to a temperature of nearly 100° C. for hours, we may assume that the tubercle bacilli in the thickened fluid are killed without exception. In order to remove these bacilli as far as possible the fluid is filtered through a clay or gravel filter.

The tuberculin thus obtained contains about 40 to 50 per cent. of glycerin and is thereby protected from decomposition by other bacteria. We have only to be careful that it is not contaminated by moulds. Thus preserved, according to all appearances, it retains its efficacy for a long time, perhaps for years.

Before it is used, its strength, as a matter of course, must be tested. This is done by injecting diminishing doses in tuberculous guinea pigs. If for testing each dose we take at least two animals and the difference between the doses diminishes sufficiently, the strength of the tuberculin may be tested with ample accuracy. In selecting the animals for the test it is, however, necessary that they be, as far as possible, in the same stage of tuberculosis.

INTERESTING CASES OF ABDOMINAL TUMORS.*

BY JOSEPH M. PRICE, M. D.,
PHILADELPHIA.

Mrs. R. [Dr. Keller's patient], suffering from sarcoma of the left ovary. She has complained only for the last nine months, has rapidly lost flesh, and continuously enlarged from encysted peritoneal dropsy.

She gave a history of a tumor and spoke of it as dropping from the right side to the left. The appearance of her face was that of one suffering from ovarian disease. There was in her diseased condition indications of more serious complications.

June 14th we operated for the removal of the diseased condition, and found encysted dropsy and sarcoma of the left ovary as large as a child's head, and as the hæmorrhage was so great from a slight examination, it was thought best to remove it, and it was done in as perfect manner as possible. The ligature of the pedicle controlled the hæmorrhage perfectly; thorough washing of the peritoneal cavity; a drainage tube at the lowest point from which the tumor was taken; careful closure with simple dry dressings completed the operation. The tube was left in four days; the patient made a rapid recovery from the operation.

*Read before the Philadelphia County Medical Society, October 28th, 1891.

I expect this poor woman to have her disease return, and that very soon, and could I have been perfectly sure of what the trouble was, I would not have operated. But when we do undertake anything for their relief, let us at least leave them in as good condition as we found them, and not with dangerous hæmorrhage to destroy them in an hour or so, and all because we have not the courage to complete an operation we had the assurance to begin.

Present: Drs. Jos. Price, Morris, Murry, and Keller.

This patient was examined on the 26th day of October; she is perfectly well and doing her work, with no indication of a return.

Mrs. J. T. [Patient of Dr. Hutzell]; this young woman, twenty-one years old, has been suffering for eight years from a complication of diseases which culminated in an operation for her relief. At fifteen years of age she had a discharge from the navel of pus and hard calcareous matter; this discharge lasted some two years; she had not enjoyed a single day of perfect health for the last seven years, but had for the most part done her housework and assisted her husband in his laborious business for the last year, with a condition of things in her pelvis that is hard to imagine anyone walking about with, much less work. She only submitted to an operation because Dr. Hutzell told her nothing else would help her to get well. Examination of the pelvis indicated pus and a general adherent condition of all the pelvic contents, so that I did not expect an easy removal of the diseased condition, but I was not prepared for such an uphill undertaking as I found was necessary for the relief of this most distressing case.

After the usual opening of an inch and a half, I found the pelvis blocked with a peritoneal cyst with dark and bloody contents; this was emptied and the contents of the pelvis at once investigated. Both tubes were diseased; the left with a more than a pint of offensive pus, the right two or three ounces of pus, both adherent to all the surrounding viscera. The enucleation was most difficult from start to finish. In addition to the pelvic disease and the peritoneal cyst, there was a collection of large, hard concretions, some of them as large as a walnut, completely covered by folds of the bowels and the peritoneum.

In the removal of these concretions there was an additional risk to the patient, they had to be removed from their bed. The bowel folded around them so that it was difficult to tell where to begin without opening the bowel. The effort for their removal consumed considerable time, but all were removed that could be found. Perfect irrigation of the entire abdominal cavity after most of the adherent bowels were torn apart. I say most of them, for it was impossible to complete the separation; they were so well formed that I considered it unsafe to do so much tearing in this complicated condition of affairs. Thorough washing, with the drainage tube in the most depressed portion of the pelvic cavity, a complete toilet, and the patient put to bed. Time of operation, forty-five minutes.

She was by all odds the best patient I had the pleasure of treating. She made a perfect recovery after one week of drainage, with not a single complaint from beginning to end.

Examined on the 26th of October; perfectly well; no pain; able to do all of her work with perfect comfort.

Miss W. R., aged forty years, suffering from a rapidly growing hard tumor filling the pelvis. The cervix high to the right and above the brim of the pelvis and a hard body the size and shape of the uterus. The tumor movable all but the pelvic portion, which was apparently fixed. The patient was only aware of a lump in the side during the last two or three weeks prior to operation; she was sure it was not there a month. When I examined her the day before the operation, the tumor was as large as a womb at the seventh or eighth month of pregnancy, and nodular. She was incapacitated for work, and it was decided to remove it as its rapid growth indicated malignancy.

July 9th, with the assistance of Drs. Jos. Price and Morris, I removed the entire uterus and appendages, and left nothing but the cervix clamped by the Delta metal wire nœud, with dry iodoform dressings to finish the operation.

The tumor was a most interesting one, and in a great measure explains the history the woman gives of its rapid growth. In the pelvis there were three fibroids with all the pathological characteristics of tumors of that nature; the cervix to the right and high up, and the uterine canal not over three inches long, enclosed by the large tumor to the right of the uterus, and front and back of it one of the little fibroids.

The large tumor was entirely different in all of its pathological appearances, and when opened had a distinct capsule, and when the capsule was opened widely gaped, as if there

were great pressure from within pushing out the muscular tumor, or I have no doubt a malignant and rapidly growing tumor inside the capsule.

Tumor examined by Dr. Bigelow: spindle-cell sarcoma.

Patient examined October 28th: at work, free from pain and in good health.

Miss M. D., aged thirty-two years, suffering from left ovarian tumor with myxo-sarcomatous contents. This young woman was accused of being pregnant by several well-known doctors who had treated her for several months. Patient submitted to an operation to remove the suspicion of her unchastity. Operation was an easy one and she made an uninterrupted recovery. Weight of tumor, twelve pounds, with contents.

Mrs. M., aged forty-five years, was taken on the 13th day of Sept. with slight pain in the right side of the abdomen; on examination it was thought the area of dulness over the liver was considerably enlarged; had no increase of temperature or pulse. An effort was made to move the bowels, which was persisted in until the 17th. During this time ten calomel powders were given, four Seidlitz powders, two bottles of citrate of magnesia in divided doses, two ounces of Epsom salts, one drop of croton oil. There was no vomiting and no increase of pulse or temperature. The patient's condition was up to this time good, but a very anxious expression of the face was beginning to appear, and she wished something done for her relief.

Pulse beginning to show signs of weakening; no tympanites. At this time we thought something radical must be done to relieve the obstruction of the bowel. Gall-stone was not suspected. Ether was given. An opening directly over the region of dulness, two inches in length, was made, when a great distended gall-bladder was at once discovered, tapped, and the contents drawn off, which was a clear, gelatinous fluid; had none of the characteristic appearances of bile. The gall-bladder was examined, and two large and one small stones removed.

The direct cause of the obstruction of the bowel was the pressure made by the distended gall-bladder with the gall-stones laying on the transverse colon. This pressure was made possible by the distension of the gall-bladder as it enlarged and was pressed backward by the abdominal wall, making pressure on the colon, and causing the obstruction, which was as complete as any I have ever seen.

Drainage-tube placed in gall-bladder, which was securely stitched in upper angle of wound; two sponges had been placed in the peritoneal cavity to protect it from the discharges; these were removed and thorough irrigation of the abdomen was made. Silkworm-gut sutures; closure of the wound; dry dressings and bandage. The effort to move the bowels was continued until the third day after the operation, when a slight movement was obtained; flatus passed freely. On the fourth day there were free purgations after large and repeated doses of Epsom salts, both by the mouth and injection. Injections were also used freely before the operation, as well as all the other treatments. Calomel powders every twenty minutes; one dozen or more given. Patient made a most beautiful recovery and is now able to attend to her home as before.

Mr. G. C., aged forty-six years (Dr. Prendergast's patient), had been suffering for a long time, when making unusual exertion, with pain in the region of the head of the colon. Four days before operation, while at Atlantic City, was taken with very severe pain in the abdomen; on his arrival at home his physician gave him small doses of mild chloride and soda, followed by Rochelle salts. He was freely purged and all the urgent symptoms relieved, but he still complained of pain at the head of the colon. After a careful examination, Dr. Prendergast decided that his patient was suffering from appendicitis or abscess at head of colon. Patient had quick pulse, subnormal temperature, distended abdomen, anxious countenance, and was a very sick man. At this time I was called in consultation, it being the evening of the fourth day of his disease. An operation was advised and consented to by the patient.

August 29th, at 8 A. M., ether was given. An opening one and a half inches inside of the crest of the ilium directly over the area of dulness down to the abscess cavity, was made, and from four to six ounces of pus and fæces were discharged. The appendix was folded back, and to the outside of the colon, almost entirely separated from it by ulceration. The parts seemed to be so soft and gangrenous in appearance, that I thought it best to leave everything in position, use irrigation, two rubber drainage-tubes, and pack with gauze; but when I washed out the cavity I found that the slight barrier that had separated the abscess from the peritoneum had been broken, the intestines protruding through the wound. I at once decided to wash out the peritoneal cavity and use glass drainage into the pelvis, and dress

the external wound as above stated. Three stitches were applied, but two were cut away that evening. Patient was freely purged the night before the operation, and began purging on second day, and continued naturally, four or five movements per day, until the fourth day; after that salines were given to keep the bowels free.

Patient made a beautiful recovery. For this result I am greatly indebted to his physician for his untiring care and attention and good treatment before, during, and after operation.

Mrs. J. W. H. [patient of Dr. C. H. Dunham, of Trenton, N. J.], suffering from extra-uterine pregnancy. Operation, Oct. 14, 1891. Recovery.

August 1st, was taken with very severe pain on left side, accompanied with diarrhœa; she was four days over her expected period; while at stool felt severe pain in lower left side of abdomen, and immediately became sick at the stomach and faint. Her period made its appearance at this time and continued for three weeks. This is her statement of her condition. She was attended for nine weeks by a practitioner unknown to me, and had frequent recurrences of her first attack. When Dr. Dunham was called to her assistance, she was having daily chills with other symptoms of peritonitis, also a tumor filling the abdomen as high as the umbilicus. At this time Dr. Dunham telegraphed me he had a case of extra-uterine pregnancy, and asked me to come prepared to operate. I went to his assistance October 14th, and found the patient in bed, perfectly comfortable, without any indication of trouble, owing to free purgation which the doctor had given her preparatory to operation. The increase of pulse and the tumor remained as proof of the correctness of the diagnosis.

A small incision was made in a thickened and much changed peritoneum, immediately on the opening of which great quantities of very offensive blood was discharged from the abdomen. Instant search for the impregnated tube was made, brought up, and ligated. Thorough irrigation and drainage; the latter was continued for four days. Great, broad flakes of inflammatory lymph were removed from this cavity. At the time of operation there was a distinct inflammatory diaphragm extending from crest of ilium to crest of ilium, leaving a large cavity lined with this product, which would not permit the internal viscera to return to their place; this cavity was filled with boiled water. Not a single bad symptom an uninterrupted recovery.

Married two years; no children.

Mrs. A. G. B. [patient of Dr. C. H. Dunham, of Trenton, N. J.; his second case of extra-uterine pregnancy in five days,] suffering from extra-uterine pregnancy. Operation, Oct. 19, 1891. Death.

Patient is thirty-six years old; has three children; eight years between first and twins twenty months old. She passed one period August 8th, and September 6th had a slight discharge, pale in color. One week later she had severe hæmorrhage with pain and symptoms of miscarriage; persistent diarrhœa with sick stomach; felt weak and faint. A rupture at this time had unquestionably taken place; hæmorrhage continued with recurring attacks of pain. The doctor had made his diagnosis early in the case, but free purgation had so relieved her that he was persuaded to delay; but her condition continuing to grow worse—pulse 130, temperature normal, patient very pale, a decided boggy feeling in the pelvis, and hardened masses in the abdomen—decided him to have an operation, and he asked me to see her and operate at once. Through a small incision I opened the peritoneum. The abdomen was full of fluid and clotted blood to the diaphragm; no odor; no indications of peritonitis. I immediately removed the impregnated tube, which was on the right side. The fœtus was also found by Dr. Dean, of Spartanburg, S. C., who was assisting us. The blood-clot was adherent to every portion of the peritoneum, and to the anterior and posterior face of the omentum. It could not be removed by flushing or scraping. A large conical clot, as large as my two fists, extended down by the rectum. All the clots and free blood that could be washed out, using three large pitchers of water, were gotten rid of. After free irrigation the peritoneum has anything but a comfortable appearance, as it was perfectly black from adherent blood-clot. There was no odor to the blood, no apparent chemical change having taken place. As to the purging in these cases, I have no doubt it is from the pressure of the clot on the rectum. The absorption of most of the fluids and saline constituents of the blood may have some effect to increase the diarrhœa. The tenesmus and straining at stool unquestionably increases the loss of blood, greatly increasing the danger of the patient.

A seven inch drainage-tube was left at the lowest point of the enucleation, and the

top of the tube just reached the abdominal wall. Boiled Trenton water was used for irrigation, and about one quart was left in the peritoneal cavity. Twenty-four hours after operation the pulse was 120, and temperature 101½°. Heart-clot feared, otherwise patient doing well.

Death from heart failure three days after operation; patient was too comfortable to do well from the beginning.—For discussion, see Society Reports.

WHOOPING-COUGH AND ITS TREATMENT.

BY JOHN M. CURRIER, M. D.,
NEWPORT, VERMONT.

Whooping-cough I regard as a disease depending upon a specific micro-organism. That organism is introduced into the system through the air passages, by inhalation. On the mucous membranes of the air passages the organisms develop, producing succeeding generations and furnishing contagion in the expired air to other persons. The membranes of the air passages become irritated and inflamed by the development thereon. The persistent, periodical cough is the act to get rid of the foreign substance. The characteristic whoop is a nervous phenomenon resulting from the prolonged, unavoidable coughing, which develops only several days after the patients have been coughing.

The indications for treatment are: 1. To destroy the organisms in their homes, rendering them inert, and sterile; 2. To render the mucous membrane of the air passages as little susceptible to the irritation of the organism as possible. The old methods of treatment I have found useless or worse than useless. I have hit upon a form of treatment which has thus far proved satisfactory and seems sufficient to not only mitigate but cut short the disease. The following powder I use by insufflation four or five times a day in mild cases, and oftener in severe ones. It is better to use it in advance of a paroxysm than subsequently. If its use is delayed too long until the effect of the anodyne has passed off it will seemingly produce or hasten the paroxysm.

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Hydrar. chlorid, corros	gr. j.
Pilocarpinæ	grs. x.
Cocainæ Hydrochlorat	grs. xv.
Ammonii Chlorid	ʒ iijss.

M. These should be reduced to an extremely fine powder.

THE REMOVAL OF THE CRYSTALLINE LENS IN HIGH DEGREES OF MYOPIA.

BY ARTHUR D. MANSFIELD, M. D.,
ASSISTANT SURGEON AT THE PRESBYTERIAN EYE, EAR AND THROAT CHARITY HOSPITAL OF BALTIMORE.

It is not a new idea, it is not an original idea, but it is a novel idea as well as an old one.

Remove the lens in a healthy eye? Produce cataract and its risks that we may obtain benefit? Shall we convert a myope into a hyperope? That is exactly the question.

What shall be done for an eye that is progressing, as is seen in all cases of high degrees of myopia? Shall we allow it to progress and be unable to stay its course? By no means—I think the proper thing to do when the indications are clear, is to remove the lens and stay the progression of the refractive error and check the anatomical changes in the eye which is bound to affect it more or less permanently.

The originator of this ingenious device by means of which a dangerous myopic eye can be changed into a comparatively harmless hyperopic eye I do not know, but Dr. Fukala, of Pilsen-Karlsbad has within the past few years, experimented on some 19 cases, which he recites in the *American Journal of Ophthalmology*, Nov. 1890, a translation by Casey Wood, of Chicago, from Graef's *Archiv. für Ophthalmologie*, xxxvi. In these cases he clearly demonstrates that good results have been obtained in many cases, the improvement ranging in many from four fold to twelve fold, with a medium or average improvement of seven fold.

We are all well aware that myopia is necessarily a progressive trouble of the eye and that the more the eyes are used the faster and more rapid is the increase of the error. In examining myopic eyes we find the fundus in most cases very characteristic, usually a thinning of the choroid and this thinning may be so great as to cause the diagnostic rupture at the nerve entrance, viz: the myopic crescent. Again we may find patches of choroiditis and even choroidal atrophy in the fundus, along with the myopia; when this is the case operative measures are contra-indicated.

I shall confine my remarks in this brief article more to a resumé of the important

suggestion than to the advancement of any new or original ideas. That the subject is an important one cannot be doubted for an instant by any ophthalmologist and even the general practitioner can see the value of such a procedure when done under proper circumstances and advantageous conditions of the fundus of the eye, both of which I will endeavor to point out to you. Ophthalmologists are ever striving to perfect a science that already is as near perfection as can well be expected when compared with others of our general science of medicine. We have few disorders that we have doubt about as to cure, not that I mean to infer that all eye troubles are curable, but when curable it is as positively known, and when incurable a like and similar knowledge is possessed.

Ideas may be suggested and meet with little or no notice, may lie dormant for years and then noticed by some one, brought forward, and prove a boon and benefit to mankind; the science of medicine is full of such ideas and this one, the topic of my article, is an instance, suggested years ago, was little thought of and lately revived and tried by Dr. Fukala, of Pilsen-Karlsbad, may prove one day a blessing to a small portion of mankind. To take up the subject: First, when should the lens be removed? Second, how should it be removed? Third, what are the benefits that will follow?

Taking up the first question as to when the lens should be removed, I may state that the indications briefly given and summarized from the lengthy article of Dr. Fukala in the "*Journal*" are as follows: The degree of myopia must be above 13 dioptres, that they should be young adult persons not over 25 or 30 years old, and able to read No. 1 of Targer's test types as their punctum remotum, that further on examination of the fundus of such an eye the retina choroid and nerve should be healthy and free from all inflammation or results of inflammatory processes.

How should the lens be removed? Dr. Fulkala recommends in all cases an iridectomy upwards, lessening thus the danger from intra-ocular tension consequent upon the discission of the lens, the iridectomy also preventing any occurrence of iritis or choroiditis. The lens should be removed by discission and not by extraction—secondary cataract should always be guarded against. The only objection to the iridectomy is the disfigurement, but the presence of the coloboma as a disfigurement is infinitely outweighed as a precautionary measure. The advantages resulting from the aphakia are summed up briefly:

1. Distinct vision for the eye is obtained.
2. Retinal images are very much enlarged which in itself is a marked advance and benefit.
3. Visual acuity is improved.
4. When using the eyes normally for the distance the myope uses his accommodation, thus the relaxation of the accommodation is marked and complete in many cases, the accommodation being impaired, which latter condition cannot be called strictly an improvement, yet it is an advantage when compared with the previous condition present in the eye prior to the operation.
5. Often in high degrees of myopia the binocular vision is at fault, especially when the degree of myopia in the two eyes is far apart as to quantity and degree, binocular vision for near work is restored by this removal of the lens.
6. The work at the punctum proximum is held at proper distance from the eyes and not at the myopic distance which varies with the degree of refractive error.
7. Spasms of the accommodation and all disturbing elements disappear in this method of treatment; this is of a necessity so, as the accommodation is greatly impaired.
8. The myope is converted into an hyperope which is not progressive and ceases to be a form of annoyance as soon as the eyes are properly adjusted with glasses.

The subject is an important one, I take it, and hope it will call forth the expression of views from any who may have had experience with the subject as presented.

129 S. Broadway, Baltimore, Md.

Society Reports.

PHILADELPHIA COUNTY MEDICAL SOCIETY.

Stated Meeting, October 28, 1891.

Dr. M. Price read a paper on Interesting Cases of Abdominal Tumor (see page 930.)

DISCUSSION.

Dr. B. F. Baer: I have been much instructed and interested in this report of the cases of Dr. Price, and I was especially interested in the case of sarcoma. I have had five cases of fibro-sarcoma, and in none of these cases has the disease returned. One

was operated on two years ago, another a year and a half ago, and the others at a more recent period. These were solid tumors. One weighed fifteen pounds, another nearly that, and a third five pounds. They were surrounded by peritoneum, but there were no papillary growths. I would infer from the report that in the case of Dr. Price the tumor was breaking down and papillomatous.

I have recently had a rather rich experience in regard to difficulties in the diagnosis of pregnancy. The most difficult operations that I have done in the last two years have been done in the past two months, in neglected cases diagnosed as pregnancy. One was a case of poly-cyst of the ovary in which the physician was so certain of his diagnosis that the pains of which the patient complained were regarded as labor-pains, and on two occasions the bed was made up for the accouchment. When the patient was *in extremis* it was decided that she was not pregnant. In this case the adhesions were frightful, and the operation was very difficult.

The second case was operated on a week ago, and the tumor weighed about sixty pounds. The patient was thought to be illegitimately pregnant, and was sent to this city two months ago, to be confined away from home. She went down hill very rapidly. Two or three of her physicians thought that she was pregnant, but in this instance, as well as the first, the mistake was due largely to carelessness. They took it for granted that she was pregnant, and did not examine carefully. She was the weakest patient on whom I ever operated. There were firm adhesions to the liver, and I think a piece of the liver was torn off. The adhesions were universal, and the tumor was removed with difficulty. So far the patient is doing well.

Dr. John C. Da Costa: I might speak of one recent case of interest in the matter of diagnosis. The patient was a woman forty-six years of age, who presented the symptoms of fibro-cystic tumor of the uterus. The only point against this view was the comparatively rapid growth of the tumor. There were two or three able men with me at the time of the operation. I found two tumors. The first one was enucleated, and seemed to be a true fibroid. The second looked like a fibro-cystic growth, but when it was cut open it was found to be a fibro-sarcoma. Hysterectomy was then done, and the uterus was found to be filled with sarcomatous tissue, although there had been no evidence of uterine sarcoma. Here we had three different conditions, two malignant and one non-malignant, but capable of change—sarcoma of the uterus, fibro sarcoma, and fibroid.

Dr. Joseph Hoffman: A point brought out by Dr. Da Costa's remarks is that a deferred operation is a dangerous one, because in all of these growths, especially those of a fibroid nature, degeneration is apt to go into something malignant. Sarcoma may take any form known to pathologists. Delay is, therefore, dangerous, and the idea of melting out tumors which are already practically on the road to malignancy by any means except radical removal is foolish, and not supported by the clinical facts. I know of one case of mistaken diagnosis of pregnancy for ovarian tumor, by which, after a very minute examination, the woman was put in the Episcopal Hospital, and allowed to remain three or four months in order to confirm the diagnosis, although the diagnosis had been made. Where the uterus can be felt outside of a fibro-cystic tumor, I do not see how a mistake can be made. In obscure cases it is better to see what we are about by an exploratory operation, than to make a diagnosis and hold on to it until time shows that we are wrong.

Dr. William E. Ashton: The danger of fibroids undergoing malignant change is an argument in favor of their early removal. In the majority of cases, however, it is impossible to urge early operation on account of the past education of physicians. We have been taught that fibroid tumors are of an innocent nature, and that when the woman reaches the menopause they will undergo certain changes which will result in the patient's recovery. I find, however, that the vast majority are not affected by the change of life. I think that in most cases in which oöphorectomy has been done in the hope of bringing about an early menopause, the results have been unsatisfactory. Another point is that a large number of these cases have diseased appendages. Many of these cases suffer pain, and this has been ascribed to pressure, but I think that this pain is due in many instances to localized attacks of peritonitis due to the diseased condition of the appendages. Taking into consideration the fact that there is danger that the growth will become malignant, and the fact that the appendages are usually diseased I think that it is the duty of the profession to educate the coming physician in regard to the necessity of the early removal of the fibroids.

Dr. Price, in his case of appendicitis, refers to the adhesions being frail, and not

trusting them. I think that if there is any doubt as to the pus being excluded from the peritoneal cavity, we should not hesitate to flush the abdominal cavity and drain. In a case on which I operated some time ago, and in which the head of the colon was ulcerated through, I had the same difficulty. I got into the abdominal cavity and found pus. With thorough irrigation and drainage there was complete recovery.

Dr. Ernest Laplace: I was interested in the apparent triple nature of the growth in Dr. Da Costa's case. A word or two will explain this. The growths started as fibroid tumors. The life of this fibroid tissue may be longer or shorter. As soon as it dies it disintegrates and softens. The apparently triple nature of the lesion was due to the growths being of different ages. The growth that had retained its integrity was the youngest, and the others were older and had undergone degeneration.

Dr. Frank Woodbury.—In connection with the remarks just made in favor of operative treatment in uterine fibroids I might refer to one patient whose history shows that circumstances alter cases, and that it is difficult to lay down any general rule that will cover every individual instance. This particular patient has been under my observation nearly twenty years. In 1874 I was called to see a colored woman, about twenty-four years of age, who had almost continuous menorrhagia. She suffered with pain, obstruction of the bowels, and difficult micturition. Examination showed a hard cervix with the uterus enlarged and firmly adherent, occupying nearly the whole upper part of the pelvis. I treated her on common-sense principles, inserting Barnes' rubber air-bags back of the uterus, inflating them twice a day until I had stretched the adhesions, and lifted the uterus out of the canal into the abdominal cavity. She became much more comfortable, and for a year continued the use of ergot and chloride of ammonium alternately. After freeing the uterus I introduced a rubber ring pessary inflated with air. She became greatly improved and passed from under my observation for some two years, when she returned with leucorrhœa. I found that the pessary had ruptured, and was almost imbedded in the vaginal tissue. I removed the remains of the pessary, and found a cicatricial ring forming a support for the uterus. The patient again disappeared, and was not seen until a year and a half ago, when she sent for me. She was then suffering with an acute attack of pain in the abdomen—probably something analogous to the pleuritic stitches which occur in old cases of pleurisy. An able physician had seen her and decided that she was pregnant and in labor. The uterus had steadily increased in size and was much denser than before, and bosses could be made out on the surface. On one occasion I remember that I had a member of this Society, an excellent surgeon and pathologist, examine the patient with me, and he pronounced it a case of sarcoma on account of the stony hardness of the cervix. I subsequently had a consultation with Dr. T. Betton Massey, a fellow-member, well known to us all as an expert in electro-therapeutics, in regard to the applicability of electrolysis to the growth. At this time I tried to introduce an exploring needle into the growth through the abdominal wall, but found the tissue almost like bone; subsequently I turned the case over to Dr. Massey, who treated her with excellent results by the Apostoli method. Under this treatment the tumor has become distinctly smaller. She now suffers no pain or inconvenience, and menstruates without difficulty. As I stated at the beginning, I regard this as an exceptional case; but, on the other hand, I am not as yet prepared to subscribe to the propriety of performing laparotomy in all cases of fibroma uteri.

An interesting point is that in 1874 she was willing to have the uterus removed, and indeed suggested the operation to me, but as I was able to afford her relief without it, I dismissed it on account of the risk; moreover, these operations were not as familiar to us then as now. Her general health has been very good, she has suffered very little, and during these many years she has been comfortable and able to earn her living by housework. The notes of the case may be found by consulting Dr. Massey's book.[1]

Dr. Charles P. Noble.—I wish to say a few words on the subject of the diagnosis of pregnancy. I think that there are cases in which the best of men may make a mistake in diagnosis as to the presence or absence of pregnancy. These are cases in which the pregnancy is complicated by a tumor, or cases in which the position of the uterus is altered, and in which the pelvis is more or less filled with inflammatory masses. I have myself seen one case in which I made a correct diagnosis at the fourth month of pregnancy, and after watching the case for two months gave up that diagnosis. It was afterward demonstrated that she was preg-

[1] Electricity in Diseases of Women, 2d ed., Phila., 1890, p. 147.

nant. The diagnosis in the first place was made partly from the physical signs and partly from the history, which was one of arrested menstruation for four months. There was a pelvic tumor continuous with the cervix, occupying the pelvis—apparently an adherent retroflexed pregnant uterus. After watching the case for two months, and finding that I could not hear the fœtal heart-sounds nor detect the intermittent contractions of the uterus, which should always be felt at this time, I gave up the diagnosis and she passed from under my care. I learned that an autopsy made later showed that the woman was pregnant, and had a tumor of the anterior wall of the uterus, which prevented one from hearing the fœtal heart-sounds and from feeling the intermittent contractions of the uterus. I can easily see how one might make a mistake where there was a uterine or other tumor in front of the uterus, but feel satisfied that if the cases are carefully investigated, mistakes of this kind will be very infrequent. It would be a great advantage to every practitioner if, when engaged to attend women in confinement, he would take every reasonable opportunity to become familiar with the feeling of the pregnant uterus. This is not only a great advantage to the pregnant woman and to the practitioner in the immediate case, but also educates the physician to distinguish between different conditions in the future. Such a course would enable the practitioner to recognize deformities of the pelvis and malpositions of the fœtus, and prepare for the proper treatment, and to become acquainted with the rhythmic contractions of the uterus. The only circumstances in which error might arise would be in cases of retained menstrual fluid, where the history would put you on your guard, and in some muscular tumors of the uterus which are said to present more or less typical intermittent contractions. Broadly speaking, when we have an abdominal tumor presenting rhythmic contractions, we can be satisfied that we have to deal with pregnancy. This sign is more reliable than the fœtal heart-sounds for the reason that if the fœtus is dead or there is a large amount of liquor amnii they are not to be heard.

Dr. James Collins.—After the rich experiences brought forward on the other portions of Dr. Price's paper, I feel that I may detain you for a moment with a reference to the case of impaction of gall-stones. These cases, I believe, are more frequent than one would suppose. I am glad that Dr. Price has given his experience. I recall two or three cases, and one especially, in which, after a long struggle and threatened obstruction of the bowel, a gall-stone the size of a pigeon's egg was passed, and the patient was relieved. In another case I begged the consultants to permit the abdomen to be opened, but they would not agree to it. At the autopsy we found that a large gall-stone had formed; that adhesive inflammation had taken place between the gall-bladder and intestine; ulceration had occurred, and then the stone had entered the bowel and lodged in the ileum, causing complete obstruction. This case occurred ten years ago. I have seen another autopsy in which a similar condition of things was found. I believe that this happens not infrequently.

Dr. Marie B. Werner.—The treatment of ectopic gestation has always interested me greatly. In discussing this subject with Professor Winckel, of Munich, I found his favorite way of treating it was with one to three injections of morphine (0.05) into the amniotic sac, feeling confident that absorption will take place. I asked him what he did in case of hæmorrhage. He replied that the blood could be disposed of by the peritoneum. Subsequently, in conversation with Dr. G. G. Bantock, of London, in regard to the disposal of the blood, I learned that he considered operation imperative. He believed that the blood would not be entirely absorbed, but that portions would become organized and produce adhesions, provided the patient escaped death.

One of the cases reported by Dr. Price to-night clearly shows that nature would have been unable to dispose of the blood, since omentum and intestines were so completely covered with clots that he found it difficult to separate them, and proves to me that, aside from arresting the flow of blood, the necesssity of cleansing the peritoneal cavity of foreign matter is distinctly called for.

These points have been of interest to me, and I thought that they might be of interest to the Society.

Dr. John B. Roberts.—I have been especially interested with reference to tumors of supposed malignant nature in the abdominal cavity. The fact that we often make diagnosis of malignant disease which are not substantiated by the subsequent histological examinations must be borne in mind. I am reminded of a case which occurred in my practice two years ago, where there was an abdominal growth which I believed to be a malignant tumor of the colon. On making an incision I came down upon a growth attached to the internal surface of the ab-

dominal wall, and, cutting through it, I found that it was a large growth of the omentum adherent to many coils of intestines. I felt sure that it was a sarcoma. I removed it as thoroughly as possible, probably getting it all away. It was referred to a competent pathologist, and found to be simply a lipoma of the omentum. I had assisted a friend a few weeks before to remove a tumor almost identical in appearance, and this has shown itself clinically to be malignant. The determination of the question whether or not these supposed cases of malignant disease are really malignant or simply a softening, or colloid degeneration of tumors of a hard nature, is, I think, important.

Dr. Wilson Buckby:—Twenty-one years ago a bit of information was given me by Dr. Atlee, who may be said to be the Father of Gynæcology, notwithstanding the pioneering of McDowell. He said that menorrhagia was due in ninety-nine cases out of a hundred to the presence of fibroid tumors, and that in the early stages they were amenable to medical treatment, and that the degenerative processes which take place are due to the neglect of the proper medical treatment in the early stages. I called him in consultation in a case of extreme menorrhagia, where the woman was almost exsanguine. He advised me to use sea-tangle tents, as was then the custom, and to make a thorough application to the interior of the uterus. He held that nine times out of ten the fibroid tumor was capable of being absorbed by his stimulating application, which consisted of compound iodine, iodide of potassium, and carbolic acid in glycerin. This was swept over the interior of the womb, and internally was given the old-fashioned ergot. My experience has been that in many cases this treatment will enable you, with benefit to the patient, to delay surgical interference.

Dr. Price:—In regard to my case of sarcoma, I would say that spindle-celled sarcoma is one of the most benign tumors of the uterus. I have had a number of cases, some of which were operated on a number of years ago, and they are absolutely free from disease. The tumor which I have reported was entirely of a different nature; it was attached to everything in the pelvis. The least touch would cause bleeding, and you could scrape out great handfuls of brain-like tissue. It was impossible to remove it all, on account of the adhesions. All that could be removed with care was taken away, and the patient is doing well. I do not believe that she will remain well. Fibro-sarcoma or spindle-cell sarcoma of the uterus is a very curable disease, and almost invariably is non-adherent. When removed it gives no further trouble.

In regard to the question of concealed pregnancy, I would say that in neither of the cases I have related did the physician examine the patient at all. Most of us in treating these cases treat them by simply looking at them without any examination; but if we attempt to do this kind of work, I think that we should go to the bottom of the condition. I do not believe that there is such a thing as concealed pregnancy—such a thing as a child of any size in the uterine cavity or outside of it. Is it not our duty to find it. If there is any question of doubt, we should wait until sufficient time has elapsed, for pregnancy, unless of the extra-uterine variety, gives no urgent indications for interference. The case referred to by Dr. Noble is one in which both the mother and child were sacrificed by attempting to remove what was thought to be an ovarian tumor. A little delay would have rendered the diagnosis clear.

I agree with Dr. Ashton in regard to appendicitis. I am confident that we are too timid in these cases. If there is the slightest shadow of a doubt as to the septum between the abscess cavity and the peritoneum, it is our duty to break through and irrigate the whole peritoneal cavity. I have seen my brother operate for appendicitis five times through a median incision, tearing away all the adhesions and doing a complete operation. In the case I have reported, I tried to avoid opening the general peritoneal cavity, but when I passed two fingers to irrigate, I found that the peritoneum was opened, and I therefore loosened up everything and washed out the peritoneal cavity, and the result was favorable. A physician in this State was taken ill and appendicitis was suspected, but a delay of twenty-four hours was advised in order to clear up the diagnosis. The diagnosis was cleared up by the man's death inside of that time. If you suspect appendicitis, explain clearly to the patient the condition you suppose to exist and the danger of the two methods of treatment—the delay method and that by exploratory operation. An exploratory operation under proper surgical methods, with absolute cleanliness, has no business to cause more trouble than a simple vaccination.

Now in regard to hysterectomy. If there is a suspicion of malignancy, it is our duty to remove the uterus. If the tumor is a

pure fibroma and the woman is near the period of the change of life, it is our duty to let it alone. At the change of life the tumor undergoes retrograde changes. The same occur where the appendages are removed. In nine cases out of ten, the appendages are diseased and they supply the stimulation to the growth of the tumor. The removal of the monthly congestion removes the cause of the growth, and at once you have a cessation of the growth of the tumor and the commencement of retrograde changes. The operation of the removal of the appendages is wholly useless in œdematous fibromas and fibroids undergoing cystic degeneration. In such cases it is folly either to wait or to remove the appendages; hysterectomy is the only treatment.

Dr. Collins has beautifully spoken my mind on the subject of gall-stones. In my case the transverse colon was immediately under the tumor and there was nothing to hinder the occurrence of adhesions, ulceration, and the discharge of the stone into the bowel; but in many such cases the patient will probably die from leakage into the peritoneal cavity. The ulceration may be outside of the position of the bowel, and it is our duty to open the abdomen and take out the stones.

A word as to the method of treatment mentioned by Dr. Buckby as having been recommended by Dr. Atlee. I have a supreme admiration for Dr. Atlee and the whole Atlee family. They have done more, with McDowell, for woman-kind in this land than any others, and have established on a firm foundation a condition of surgery that to-day, even in my own hands, has saved more than one hundred lives. The kind of fibroids that will be relieved by such treatment are not fibroids. They are either badly treated abortions or granular conditions of the endometrium: a condition that can be removed by the curette. Such a uterus is as smooth as a ball. It is not nodular.

I could wish no better example than the case cited by Dr. Woodbury as proof of the value of operative treatment. This poor woman was an invalid for twenty-two years, and was then treated with electricity by Dr. Massey—driving an electrode through the abdominal wall into the tumor. This is not Apostoli's treatment, and I congratulate Drs. Woodbury and Massey that they did not have a death instead of benefit from the treatment.

There are over 40,000 physicians in Japan.

Selected Formulæ.

PILLS FOR BLENORRHAGIC ERECTIONS.

The following pills are said to produce good results in the painful blenorrhagic erections:

℞ Camphor.....grammes 2.
Thebaic extract..... " 0.20.
M. Divide into 20 pills. Sig. Four pills to be taken in the evening, one every 15 minutes.

—*Journ. de Malad. Cutan. et Syphilit.*, October, 1891.

INJECTION FOR LEUCORRHŒA.

Heuske recommends the following injection for this disease:

℞ Chlorate of potassium.....grammes xxx.
Tincture of opium..... " xxx.
Tar water..... " cccclxx.
M. Sig. Two or three tablespoonfuls to be placed in a litre of lukewarm water, for vaginal injections, morning and evening.

—*Revista de Ciencias Médicas de Barcelona*, Oct. 25, 1891.

CHLOROTIC DYSMENORRHŒA.

The following mixture is recommended by Monin, for the above affection:

℞ Tincture of honey.
" of saffron.
" of iodine, aa.....grammes xv.
M. Sig. Twelve drops before each of the principal meals. At the same time, every 8 days a warm bath, to which 125 grammes of chlohydrate of ammonium is added should be taken.

—*Journ. de Méd. de Paris*, Nov. 1, 1891.

NAPHTHALIN IN THE TREATMENT OF SEAT-WORMS.

Naphthalin has been applied by Minerbi in the treatment of seat-worms. The author was able to completely cure 11 children, suffering from these parasites, in 8 days. The formula employed by him was as follows:

℞ Naphthalin.....grammes 1 to 1.50.
Olive oil..... " 40 to 60.00.
M. Sig. For a rectal injection.

For adults the following was used:

℞ Naphthalin.....grammes v to vj.
Olive oil..... " lx to lxxx.
M. Sig. For a rectal injection.

—*Journ. de Méd. de Paris*, Nov. 1, 1891.

POTION FOR BRONCHO-PNEUMONIA IN CHILDREN.

According to J. Simon, the following is an excellent potion to be employed in infantile broncho-pneumonia:

℞ Acetate of ammonium.....grammes 0.50.
Tincture of aconite root.....gtt. xv.
Syrup of codeine.....grammes v to viij.
M. Sig. A teaspoonful every hour at the beginning of the disease.

—*Journ. de Méd. de Paris*, Nov. 1, 1891.

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LEADING ARTICLE.

THE NEW TREATMENT OF PNEUMONIA BY LARGE DOSES OF DIGITALIS.

We have certainly entered a new era in regard to the treatment of one of the most common and dangerous of affections: pneumonia. The routine practice of blood-letting and the administration of tartar emetic will now be laid aside, to be superseded by the employment of a drug that bids fair to become almost a specific in the disease under consideration.

Traube, Wunderlich and others who first employed digitalis in large doses, noticed good effects, and following the teaching of these investigators, Petresco and more recently Huchadert, Bardet and Tikl, have tried the drug with most gratifying results. Petresco, more extensively, perhaps, than other observers, has especially investigated the subject, and since he first began to employ the remedy he has entirely abandoned all other therapeutic measures. Before 1883, this author was a confirmed believer in the tartar emetic and blood-letting treatment; but all this was immediately abandoned after he began to employ large doses of digitalis. Petresco claims that the drug does good not only in infectious croupous pneumonia, but even in broncho- and pleuro-pneumonias. He asserts to have cut short the disease by this sole treatment, in from 24 to 48 hours, during which time he has observed an abrupt fall of temperature, from 106.5° F. (the highest seen) to 98°, 96 $\frac{4}{5}$°, and even 95° F., together with a marked reduction of the pulse, which from as high as 140, and even higher, was brought down to 60, 40, 30, and, in one remarkable instance, to as low as 24. In the last case the patient fell into a quiet sleep, this being followed by a local and general improvement. The author has compared the results obtained under the action of digitalis with those observed in the treatment by other drugs, such as alcohol, bromide of potassium, caffeine, stropanthus, and also with those offered by the expectant and emetic methods, and finds

that, taken all in all, digitalis is far superior in every respect. His statistics are certainly very interesting and fully sustain his assertions. Thus, in 825 cases treated by him since 1883 exclusively by large doses of the drug, he has only had a mortality of 2.06 per cent. Bennet, it will be remembered, obtained under the tonic treatment, a mortality of 3 per cent. in 129 cases; and a mortality of 6.08 per cent. in 720 cases under the expectant treatment. In the experience of Edinbourg in a record of 698 cases treated by venesection alone, the mortality was 34.05 per cent., which speaks for itself.

Petresco communicated the excellent results obtained by him under the new treatment to the Paris Academy of Medicine in 1888, to the Therapeutic Congress of 1889, and, lastly, to the recent International Medical Congress held at Berlin. Yet, up to a comparatively short time, Petresco had few followers. In November, 1890, Huchardet and Bardet presented to the Societé de Therapeutique the results obtained by Chardet in the clinical wards, and by Bardet in the Laboratory from a series of experiments on animals. Both authors agreed that the doses of digitalis should be considerably larger than those generally employed. Petresco has been in the habit of using from 60 to 90 grains a day, in infusion, for three and four days consecutively. With these quantities the author has never noticed untoward effects, such as vomiting, diarrhœa, disturbances of the pulse, and much less collapse.

The latest contribution to the subject is that of Tikl, of Vienna. His results have been most gratifying. This distinguished practitioner has made, up to the present time, 61 carefully studied observations, of which 47 were cases of fibrinous, and 14 of lobular pneumonia. All these cases were exclusively treated with large doses of digitalis. Only one death occurred out of this number, giving, therefore, a mortality of only 1.65 per cent., a gratifyingly low figure. In the whole series of these cases, some disagreeable, but not fatal, symptoms were observed: in two, there was a moderate collapse; in twelve, vomiting; in four, an intermittent pulse; and in a few, slight diarrhœa. These effects, however, disappear on the suspension of the drug, after which the good results come on rapidly. Tikl prescribed, during 24 hours, 3 grammes of the digitalis in 200 grammes of water in the form of infusion. According to the author, digitalis shortens the period of the disease, and causes it to assume a benign character. From the 2d to the 3d, or, at least, the 5th day, the temperature begins to decline, and *pari passu* with this phenomenon there is a gradual decrease in the cardiac rate, together with a marked amelioration of the general condition of the patient.

These observations of Tikl coincide with those of Petresco and it would seem as if in the use of digitalis, in the quantities indicated, we have a most valuable method for the successful treatment of pneumonia; a method, in fact, superior so far, to all others.

Correspondence.

PROMISCUOUS SPAYING OF WOMEN.

Editor of the Medical and Surgical Reporter:—In the issue of the Reporter for November 14th, 1891, there appears a letter from Dr. Todd with the above title. In it the Doctor reports that four cases of abdominal section for the removal of the ovaries have come under his notice, of which one died and three recovered; also that several patients did not understand the nature of the operation, and that one, a young married woman, was not relieved of irritability of the bladder a few weeks after the operation, and that he had regarded this case as one of nervous temperament, and irritable bladder due to marriage. He makes this report the basis of a severe criticism of modern gynæcologists, imputing to them the base motive of operating for operation's sake, and intimating that the ovaries are removed for all sorts of gynæcological diseases.

It is to be regretted that Dr. Todd has not been more definite, and that he has not furnished the evidence upon which he has based his animadversions. He says nothing at all concerning the nature of the diseases for which three out of four of the operations mentioned were performed. Hence we are left in the dark as to whether the indication was a pus tube, an ovarian cyst, or a tumor

of the womb. The fourth case he says was one of irritability of the bladder which he attributed to a nervous temperament and a recent marriage; but the evidence on which he based his opinion is not given. Did he make a careful pelvic examination? Did the recent marriage relation irritate the bladder through gonorrhœal infection, or by irritating a dermoid tumor previously quiescent? These matters we do not know, nor do we know what the surgeon found when he operated. Hence, with reference to the four cases in question, the intelligent reader is absolutely at sea as to whether the respective operations were indicated or not. All that we know or can reasonably infer is that the treatment which had been employed before these women consulted the surgeon had failed to afford relief, and that their sufferings were such as to induce them to seek relief through operation.

My object in writing this letter, Mr. Editor, is not so much to point out the deficiencies in the criticism of Dr. Todd, as to enter an emphatic protest against the baseless assumption of not a few members of the profession that gynæcologists are engaged in removing healthy ovaries. They say "it is the fashion now to remove the ovaries for all sorts of conditions." Let them fortify their statements with the proofs. I am not familiar with a single gynæcologist who advocates the removal of the ovaries, except for incurable disease of the ovaries themselves, or of the Fallopian tubes, or for the uterine fibromyomota. In exceptional cases, when the social status of the patient prevents her from obtaining the conditions necessary to a cure in cases of defective development of the sexual organs, and of ovaritis, this rule is departed from when life is made miserable by the morbid condition present. Nevertheless, the broad rule laid down is adhered to, and prominent operators one and all deny that they depart from it, and repudiate the allegation that they remove healthy ovaries. This being the case the burden of proof rests with those whose statements in general are unaccompanied by evidence. A very curious and interesting point is that those who say most about the removal of healthy ovaries do not base their statements upon personal observations of specimens removed. To make such charges against the gynæcologists of to-day and to impute the motives underlying their work is to say that that field in medicine which requires the firmest convictions, the greatest courage and judgment, the greatest manual dexterity and the most faithful attention to details, to ensure successful practice, has failed to attract to its service worthy successors and followers of McDowell, Atlee, Sims, Wells, Keith, and others, who have done so much for the science of medicine, and to perfect the art of surgery. If there be black sheep in the flock, gynæcologists will welcome their exposure; but let not the sins of these, if such there be, be imputed to all.

Ill-founded charges of the kind under discussion do great harm. Physicians who are unable to follow the work of surgeons receive a false impression, and they in turn convey this impression to their patients. And so many a poor woman whose life or whose health depends upon surgical aid, rejects it, because she has been led to believe that the surgeon "only wants to use the knife" and that the gynæcologist wishes "to remove healthy ovaries." This is no fancy picture, but one which I have not unfrequently seen.

The limits of a letter will not permit me to refer to the more than questionable use of the terms "spaying" and "unsexed" as applied to women whose uterine appendages have been removed for disease—perhaps more often of the tube than of the ovary—nor can I consider now, the serious statement that in one case the uterine appendages were removed without the knowledge of the patient; but my object is accomplished when I insist that it is a most serious thing to impute the motives of men as a class, and that it should be done only upon the most indisputable evidence; and, further, that great harm has been done, and is being done, not only to the profession but to unfortunate sick women, by what I may call the present fashion of making loose statements about operating gynæcologists.

Very respectfully yours,

CHARLES P. NOBLE, M. D.

IS TYPE-WRITING INJURIOUS TO THE EYES?

TO THE EDITOR OF THE MEDICAL AND SURGICAL REPORTER:—I have been not a little interested in the article in the issue of the REPORTER of November 21st, "Is Type-Writing Injurious to the Eyes." As I am engaged in short-hand and type-writing nearly all the day long, I think that I am prepared to answer, and my reply is in the affirmative; and not only are the eyes troubled, but the head as well. After type-writing all day my head has ached very much, and my eyes have been so weak that when I have struck the open air they became filled with water, and I could scarcely see

around me for a few minutes. This constant strain upon the eyes and head cannot do one any good; and those affected in this way should drop such work.

The question arises in my mind, does not writing at the desk affect one's eyes and head also?. I do not think that it does as much as type-writing, because in the latter one has to keep looking at the keys and at the work that he has done to see that it is correct, and hence a greater strain is inevitable.

A. T. Sherman, M. D.,
Brooklyn, L. I.

Book Reviews.

PRACTICAL INTESTINAL SURGERY. By Fred. B. Robinson, B. S., M. D., Professor of Anatomy and Clinical Surgery, Toledo Medical College, Ohio. Two volumes, 8 vo. pp. 172–206: Being two parts of The Physician's Leisure Library George S. Davis: Detroit, 1891.

The appearance of this work is timely. The last five years have marked a great advance in our knowledge of the surgical diseases of the intestines and in the technique of operations on these structures. This is made available to the profession in the present book, at the modest price of fifty cents.

The author has written from the standpoint of the experimenter upon animals, and he has borrowed almost exclusively from similar workers; hence, we find but little of the traditions of the elders. Volume one treats of the alimentary canal, the peritoneum, the mesentery, peritonitis, adhesions, diagnosis of intestinal obstruction, with abdominal section therefor; technique of intestinal surgery, omental grafting, intestinal anastomosis, intestinal invagination and volvulus. Volume two treats of gastro-enterostomy, patency of the ileo-cæcal valve, intestinal obstruction, resection of intestine, gastrotomy, Senn's hydrogen gas test, gunshot wounds of the intestine and abdomen, actual and experimental, with concluding propositions and an illustrated appendix showing various operations upon the alimentary canal. In short, the work is a full exposition of the subject. The style is plain but not elegant. Records of the various experiments are scattered throughout the book. The author himself has contributed four things to intestinal surgery: segmented rubber and rawhide plates for anastomosis, a new invagination operation, and a modified Jobert's operation. Finally, it is not too much to say that not only for what it contains but for what it suggests, the work should be read by every one dealing with the diseases of the alimentary canal.

PERISCOPE.

THERAPEUTICS.

ADMINISTRATION OF CREOSOTE.

Among the methods proposed for disguising the disagreeable taste of creosote when in mixture, the following appear to be the most preferable (*Rép. de Pharm.*, September 10th):

1. *In Milk.*—Dissolve the creosote in a definite quantity of rum, or in alcohol of 60 per cent. and add a measured quantity of this, containing a proper dose of creosote, to warm milk strongly sweetened with sugar.

2. *In the following Mixture.*

		About:	
Creosote	10 Gm.	160	grains.
Alcohol, 80 per cent	250 "	10	fl. oz.
Glycerin	100 "	3	"
Syrup of Tolu	500 "	10	"
Cherry Laurel Water	70 "	2½	"
Water	70 "	2½	"

Dose: 10 Gm. (or about 135 minims), containing 0.10 Gm. (or 1.6 grains) of creosote. The proportions may of course be somewhat varied to accommodate themselves to our usual measures.

METHYLENE BLUE IN MALARIA.

As it has been shown that both in dried and fresh blood preparations the malaria plasmodia can be perfectly colored by methylene blue, and as in both warm and cold-blooded animals it colors the red blood corpuscles, Drs. Guttmann and Ehrlich hit upon the idea of trying it therapeutically in malaria. Their expectations have been realized, and the investigators have shown that methylene blue exerts a decided action on malaria poison. The febrile attacks ceased the first day of its use, and in eight days at the latest the plasmodia disappeared from the blood. The form of drug employed was the chemically pure prepared by Meister, Eucius, and Bruening. It was given in doses of 0.1 grm. in capsules five times a day in the fever free interval. In the first case it was given every three hours, in two cases of quotidian the five doses were given at hourly intervals. The remedy must be continued in daily doses of 0.5 grm. for at

least eight days after the cessation of the fever. No disagreeable by-effects were observed, except slight bladder irritation. The daily excretion of urine was also observed to be increased. The urine was colored intensely blue. The intestinal evacuations contained the methylene blue in a reduced form, but they became blue on exposure. It was not ascertained whether the drug would prevent relapses.

UNTOWARD SYMPTOMS FROM THE ADMINISTRATION OF MERCURY.

Dr. Streffer, in his inaugural dissertation at the University of Würzburg, gives some statistics of untoward symptoms in the various methods in the administration of mercury, his material consisting of 453 cases from the Lock Hospital. He pays particular attention only to stomatitis, dysentery and brain symptoms, and arrives at the conclusion that the injection method produces the least percentage of untoward symptoms and that salicyl and thymol-mercury are the best combinations for the purpose, the former producing stomatitis even more rarely than the thymol-mercury; while the peptone compound is the best of all soluble mercurial preparations. In children mercurial ointment or baths and the internal administration of calomel were tried, and in one case sublimate was injected, all of these methods proving successful, but none more so than the ointment.—*Lancet.*

BRYONIA ALBA AS A REMEDY.

Dr. Huchard (*Rivista Clinica e Therapeutica* 1891) calls attention to a very old remedy, which has during our own time escaped attention, namely, bryonia. Bryonia is a member of the Cucurbitaceæ. The part of the plant used is the root, which may attain the size of a man's arm, or even the thigh. The root is fleshy and yellow in color, while its juice is acrid and bitter. In the spring it is full of a white, irritating, and drastic juice. Its active principle is called bryonine. This remedy is one of the most ancient of medicines. Dioscorides praises its purgative and diuretic properties. Boerhaave used the dried root in wine as a cathartic in the treatment of dropsy. Harmand du Montgarny (1783) called it "the true European ipecacuanha," and used it in dysenteric diseases. Bryonia is a hydrogogue purgative which causes profuse watery stools, similar to those of jalap or senna. Too strong doses cause poisoning and a choleriform state. Huchard recommends the remedy as a purgative, 3 grammes (45 grains) of the powder at a dose, this dose producing in a case of hypertrophic cirrhosis with constipation five liquid stools and slightly colicky pains; he also recommends it in whooping-cough, febrile diseases and inflammations of the respiratory tracts; in bronchitis, pleurisy, pneumonitis, etc. Bouchet used the tincture in febrile diseases. Dr. Louvet-Lamarre used bryonia in whooping-cough, where it diminishes tracheo-bronchitis, but does not shorten the duration of the disease. The dose is 1 gramme (15 grains) per day for a child of 7 years. During the spasmodic stage Lamarre prescribed the tincture of arosera, 1 gramme (15 drops) per day. Huchard uses a larger dose, 2 to 5 grammes (30 gtt. to 1¼ f℥) of the tincture. The two remedies may be associated, 1 to 2 grammes of bryonia tincture to 2 to 5 grammes of arosera. The powder may be given ½ to 4 grammes per day.—*Cincinnati Lancet-Clinic,* September 19th, 1891.

ATROPINE IN HEART DISEASES.

Dr. Cardarelli (*Norsk Magazin for Lægevindenskaben,* No. 4, 1891) has found that atropine is doses of one-half to two milligrammes (1-128th to 1-32d of a grain) injected subcutaneously removes the inhibitory influence of the pneumogastric. The pulse increases in frequency and the blood pressure diminishes. Hence atropine is indicated in irritation of the pneumogastric. Whenever a slow pulse, with dizziness, convulsions and syncope, are present, atropine is indicated.

OXYGEN AS A REMEDY IN CHLOROFORM NARCOSIS AND CHLORAL POISONING.

The therapeutic action of oxygen, taken by inhalation, has an imperfectly recognized position with the profession at large. The *Medical Press and Circular* for June 3d, speaking for the English medical faculty, states that the remedial employment of the gas has, in Great Britain, "been almost discontinued, chiefly for the reason that until quite recently the difficulty of procuring a supply of the pure gas and the delay, trouble, and expense attending its administration did much to prevent it occupying such a place in the therapeusis of the practitioner as its known physiological effects warrant." At the present time, however, the compressed gas in iron bottles can be obtained from the apothecaries in the English cities "with the same facility as any

other drug." The writer regards with surprise the unaccountable fact that one of the most active of therapeutic agents has been so little used that it may be said to have no place in practical therapeutics. As a quick and efficient respiratory and cardiac stimulant it is deserving of more frequent employment in cases of asphyxia, whether resulting from poisonous gases or general anæsthetics.

In the suffocation of angina pectoris, the writer says, the beneficial action of the gas has been abundantly proved, and among other cases occuring latterly was that of Gen. Philip Sheridan, in which the treatment followed was like that of Dr. Robert Reid, of Dublin, who, in 1817, used and advocated the gas as a practicable remedy for this affection. One of Dr. Reid's cases was that of a man, aged sixty-four, who had suffered greatly from angina, and who obtained an amount of relief from oxygen by inhalation that no other agency gave him. The effect of the gas is, however, generally temporary, but life may often be saved by a temporary tiding over of the suffocative attack. The writer quotes from a recent number of the *Nineteenth Century* a case of gas poisoning which was successfully treated by oxygen inhalation. A soldier was found apparently lifeless and pulseless in consequence of having been exposed for a considerable time to coal gas from a burst balloon. An officer of his command bethought himself of a bottle of compressed oxygen as a possible antidote. A tube having been attached to the bottle, its mouthpiece was conveyed to the man's mouth. The oxygen was liberated through the tube and appeared to force its way into the man's lungs and to become an immediate stimulant to the respiratory organs. In from ten to fifteen seconds from the first outrush of the oxygen gas the man, who had just before presented the aspect of a livid corpse, became agitated with paroxysms of a violence so marked that it was deemed expedient to order four of his comrades to hold him quiet. A half-hour later the man was calmly walking back to the barracks, all danger being at an end. The writer accepts both the authenticity and promptness of the recovery in this case as a lesson in the treatment of cases of poisoning with carbon gases, especially those of the methane series. He also commends it to the attention of all who are concerned in the administration of anæsthetics, and remarks: "How much better a whiff of pure oxygen than artificial respiration in chloral poisoning and chloroform narcosis!"

So far as the writer's knowledge extends, there are only two publications in which any advocacy has been made of this plan of treatment—namely, the work of Mr. George Foy on *Anæsthetics*, and M. Demarquay's *Pneumatology*. The writer adds: "Hospitals are provided with electric batteries to resuscitate the asphyxiated and to stimulate the respiratory function, but a more useful and active remedy, oxygen, finds no place in the emergency apparatus of the operating theatre. We hope, however, soon to be able to report that all our general hospitals are provided with a stock of oxygen gas and a suitable apparatus for its administration."

In a later number of the *Press and Circular* a retired army surgeon adds the suggestion, germane to the foregoing, that a supply of oxygen might with propriety be made a part of the medical supplies of military stations, for emergencies by drug poisoning narcosis, and other forms of asphyxiation. Oxygen may be serviceable in the after-treatment of surgical cases. Dr. A. W. Catlin touches upon this subject in the *Brooklyn Medical Journal* for August, in an article entitled, "Oxygen as a Distinct Remedy for Disease and a Life-saving Agent in Extreme Cases." He observes that after prolonged surgical operations, where the patient has been "thoroughly saturated with the anæsthetic," and where as a consequence recovery is tardy and convalescence is unsatisfactory, oxygen may be administered and will be found to enhance the reparative functions of assimilation and to quicken local repair. Oxygen is a great burden-lifter from the heart in most cases of dyspnœa, and indirectly quiets nervous storms so that sleep is seen not infrequently to follow in the train of an improved aeration of the blood by means of its inhalation.—*N. Y. Med. Jour.*

METHYLENE BLUE IN NEURALGIA.

Dr. Immerwahr (*Deutsche med. Wochenschr.*, October 8th, 1991) has recently studied the action of methylene blue in alleviating neuralgic pain, and is of opinion that under certain circumstances the drug is a valuable agent. Thus, in two cases of facial neuralgia and in three attacks of migraine complete relief was speedily obtained. Nervous headache, alcoholic depression, muscular rheumatism, and herpes zoster were also found to be benefited by the

drug. Hence, although Immerwahr has not yet been able to try it on a large number of patients, he is satisfied with this new antineuralgic agent, and recommends further trials. In sciatica, methylene blue appears of no value, nor is it suited to other than nervous pain, for example, that due to ulceration of the stomach or cancer. Dr. Immerwahr administers the drug as a dry powder enclosed in gelatine capsules (2 to 5 grains for a dose), three times a day. No ill effects have attended its administration, except that after prolonged use some strangury occasionally sets in, which soon yields to small doses of powdered nutmeg. The urine assumes a blue color, which may frighten the patient unless he is forewarned of its occurrence.—*Brit. Med. Jour.*

ON SALINE TRANSFUSIONS IN CHOLERA, HÆMORRHAGE, AND CHLOROFORM COLLAPSE.

Dr. Benjamin Ward Richardson, writes in the *Lancet*, that Mr. Arbuthnot Lane and Mr. Francis Heatherly, in their late able communications to this journal revive a long-forgotten but most important subject—namely, the effect of saline solutions injected into the venous circulation in states of collapse. The phenomena of temporary resuscitation following upon such injections are amongst the most remarkable on record. In a case of Asiatic cholera treated by the late Mr. Henry Ancell, Dr. Rose Cormack, and myself, a woman of middle age sank, in the collapse, into complete insensibility. In this state we injected through a vein in the arm two pints, after Stevens' original plan, with the astounding effect that our patient became quite conscious, sat up in bed, dictated a short will, and signed it in proper form. We left the house, thinking that recovery might follow, giving directions for the steady administration of a mixture of creosote and compound tincture of camphor, a mixture which had been in my hands successful in restraining the choleraic flux. But an hour later Mr. Ancell was back to me requesting me to return with him to the patient's house. The purging had returned, and the collapse was as serious as before. Once more we injected the saline solution, with the same phenomena of resuscitation. Dr. Richardson suggested this time that the injecting tube should be left tied in the vein, that the syringe at the other end of the elastic connecting tube should be filled with saline solution and placed in a hand-basin of water kept at blood heat, and that the injection should be gently repeated so soon as any symptom of collapse should reappear. This was acted upon, and for many hours the current of injection was kept up. It was observed under this line of treatment, which was identical with that to which Mr. Heatherly adverts, this very curious practical fact, that there was never any rallying at all from the injection so long as the current of saline solution was continued as a gentle feeding current. But when they pushed in the solution freely, so that the vessels were brought by the pressure into tension, then the signs of reanimation returned. They returned with decreasing activity no less than six times, but they were always succeeded by the choleraic discharge and with spasm of the lower limbs, so that ultimately death closed the scene about thirteen hours after the first injection.

Bearing on the subject of saline injections and transfusion of blood, Dr. Richardson made at one time a large number of observations. From the fact that the harpooned whale may sometimes live for long periods after profuse loss of blood, owing to the introduction of the saline sea-water into its circulation, Dr. Richardson thought it possible that an injection of a saline solution might be effective in sustaining life after loss of blood; and more than once he witnessed in the lower animals apparent reanimation from what seemed actual death. But this only occurs when there is still some remaining circulation, and when some blood is left in the veins with which the saline substances can admix. From this he drew the conclusion that the saline did its useful work, not by any sustaining power of its own, but by its action in mixing with and forcing blood still in the vessels onward in its course. He tried thereupon to produce an artificial saline fluid, like blood itself, that would convey the proper elements and would oxidize in the pulmonary circuit. In this direction he made one good advance. He discovered that if fresh venous blood were added to a saline solution sufficiently charged with proper saline substance to sustain the even fluidity of the blood, such solution, warmed up to natural blood heat, was the best of all injections for restoring the phenomena of life. In the course of his Croonian lecture to the Royal Society Dr. Richardson suggested that blood added to a saline solution might be dried down so as to be kept, in sealed bottles, ready for use in transfusion; but he believes now it would be most practical to add freshly drawn venous blood to the saline solution at the time it was wanted.

A saline solution, consisting of thirty grains of chloride of sodium and fifteen grains of phosphate of soda in a pint of distilled, water, takes up and holds in even solution at blood temperature ten fluid ounces of fresh venous blood, if the blood, as it flows from the vein, be caught in the solution whilst cold and be gently stirred into it with a clean glass rod. This, he conceives, would be the best of all fluids for venous transfusion in the collapse of cholera and hæmorrhage, in both of which emptiness of the circulatory cavities is the cause of the collapse. In extreme chloroform or methylene collapse, where no blood is lost, a portion of the saline solution alone, with the addition to it of five minims of strong solution of ammonia or a fluid drachm of the aromatic spirit of ammonia to twenty fluid ounces of it, would be a good venous injection in conjunction with artificial respiration. For injection purposes the automatic syringe, which Dr. Richardson exhibited at the Medical Society of London, last session, fulfils every intention. It prevents admission of air into the vein, and in working it the operator has simply to move the piston up and down in order to fill the barrel from the source of supply by the up stroke, and propel the charge onward, by the down stroke, into the circulation.

MEDICINE.

TYLOSIS PALMÆ ET PLANTÆ.

Dr. Radcliffe Crocker (*Brit. Journ. of Derm.* June, 1891, p. 1) relates a case of this disease in which the thickening of the palms and soles was preceded by general irritation of the skin. After six months itching all over the body, bullæ began to appear, and after a condition of dry skin, the patient (a woman, aged 56) began to sweat profusely, and within a year of the first appearance of irritation in the skin, the epidermis of the palms and soles began to thicken. Eighteen months after the first appearance of this disease the body was thickly covered with erythematous patches of a bright red color representing the sites of previous bullæ, whilst there were numerous bullæ from a pear to a pigeon's egg in size present on the trunk, and a few on the limbs. There was profuse hyperidrosis, and the author considers the question of hyperidrosis being an etiological factor in relation to palmar and plantar thickenings as worthy of further investigation.—*Brit. Med. Jour.*

PREVENTABLE BLINDNESS IN THE YOUNG.

Dr. C. D. Conkey, in discussing, in the *Northwestern Lancet*, this important and neglected subject reaches the following conclusions:

1. That the largest proportion of blindness in the young can be prevented.
2. That the majority of cases of blindness develop in the practice of the general practitioner, in the course of the invasion of the grave diseases of childhood, or as a sequence to these, or as a result of a contagious leucorrhœa in the mother.
3. That to successfully prevent them, prophylactic measures should be adopted in all cases where danger is suspected, or where the eye shows a tendency toward inflammatory action.
4. That the physician should be sufficiently acquainted with eye diseases to treat them skilfully when the eye becomes invaded.
5. After all severe attacks of the diseases of childhood the patient's sight should be carefully tested before he is dismissed as convalescent.

If these precautions were carefully observed, he is confident that the percentage of blindness would be greatly reduced among the young, and to the many thousand children that yearly become blind would be preserved this most precious of all the senses.

ANALYSES OF TWO HUNDRED AND SIXTY-CASES OF CHOREA.

Goodall (*Guy's Hosp. Reports*) has analyzed the above number of cases of chorea occurring in the Hospital during eleven consecutive years. Seventy-four of this number were males and one hundred and eighty-eight females. The youngest case was a female infant of one year; the oldest case a man of thirty-six years. There were one hundred and four cases that had recurrence of the disease. The smallest number of attacks occurred during the summer months. Hemichorea was present in sixty cases. In one hundred and fifteen cases the heart was normal, twenty-one of which number had had rheumatic fever. In one hundred and thirty-five cases there was some cardiac or vascular change. As no mention is made of the presence or absence of hypertrophy or dilatation, it is impossible to make out what per cent. of these the author regards as being chronically diseased.

There were eleven fatal cases, in which death was due to changes in the endocardium, emboli probably being formed in many cases. Seventy-one cases had had rheumatic fevers; in only sixteen cases did choreic manifestations precede the fever.

The family history showed chorea in twenty-eight cases, mother, brother or sister having been affected. There was no history recorded of a father having had the disease. As causes are mentioned rheumatic fever, fright (forty-two cases), irritation, pregnancy, injury.

AVOIDANCE OF STIMULANTS DURING HÆMORRHAGE.

It is customary, when the accident of hæmorrhage occurs, for the operator, or some bystander, to administer wine, brandy, or some other alcoholic stimulant to the patient, under the false idea of sustaining the vital power. It is my solemn duty to protest against this practice on the strictest and purest scientific grounds. The action of alcohol, under such circumstances, is injurious all round. It excites the patient, and renders him or her nervous and restless. It relaxes the arteries, and favors the escape of blood through the divided structures. Entering the circulation in a diluted state, it acts after the manner of a salt in destroying the coagulating quality of the blood; and above all other mischiefs, it increases the action of the heart, stimulating it to throw out more blood through the divided vessels. These are all serious mischiefs, but the last named is the worst. In hæmorrhage the very keystone of success lies so much in quietness of the circulation that actual failure of the heart, up to faintness, is an advantage, for it brings the blood at the bleeding point to a standstill, enables it to clot firmly, when it has that tendency, and forms the most effective possible check upon the flow from the vessels. In a case where I had to remove a hard palate, that had become carious, in order to reach and twist a bleeding vessel, although the quantity of blood lost during the hæmorrhage amounted to over three pounds in weight, and the syncope was so extreme the patient did not know anything had been done to him after he returned to consciousness, not a drop of stimulant was administered at any stage, and the care to avoid such administration was carefully sustained after recovery, in order that the rapid action of the heart might not overcome the resistance of the tenderly sealed up vessel. I am certain that this rule of avoiding stimulation was far more effective in saving my patient's life than any surgical skill of mine, for the vessel I twisted might have become plugged up, naturally, during the syncope, but nothing would have prevented the bleeding from breaking out afresh if the heart, instead of being allowed to swing round of itself, slowly and safely, had been whipped, for a brief period, into violent action. I refer to this case as typical, because if a stimulant were not wanted in it, a stimulant cannot be called for in examples less severe. The course followed was simply to lay the patient quite recumbent when signs of faintness supervened, and, so long as he could swallow, to feed him with warm milk and water freely. Such, in my opinion, is the proper treatment to be employed in every instance of syncope from loss of blood—*The Asclepiad*, vol. viii., No. 29, 1891.

SARCOMA OF THE FRONTAL BONE.

M. Ricard presented a patient on whom he had performed the removal of a sarcoma of the frontal bone, leaving exposed a considerable surface of the frontal bone. This loss of substance was supplied from the ilium of a dog completely sterilized. The union was immediate, and three and a half months after the operation the graft was perfect.—*Journal de Medicine, Paris.*

THE HYPERPYREXIA OF RHEUMATISM.

Dr. H. C. Male has prepared for the *Practitioner* a study of eighty-three cases of rheumatic hyperpyrexia reported during the twenty years ending in 1890. In fifty-five of these cases the temperature exceeded 106° F., running as high as 110·4°. In one series of cases, thirty-nine in number, all having as their maximum temperature 106° to 110°, thirty-four were treated by cold bathing, with fourteen recoveries. Of those having the more moderate pyrexia, with the maximum at 106° and 107°, eight out of eleven patients recovered under the cold-bathing treatment; all of those that were not bathed died. In the last ten years cases and recoveries have been reported from time to time in the journals, and no fewer than sixteen cases of temperatures ranging from 106° to 110° are on record. The number of recoveries was thirteen. The pack was used in eight of these, with two deaths; the bath was used in the other cases, with one death. It is not proposed from these figures to base a ratio of recoveries on a study of the re-

ported cases alone, for it is probable that many unsuccessful cases have not been reported, while the majority of the successes have without doubt been given to the journals. But these reported recoveries are a satisfactory witness that lives have been saved which under other conditions must certainly have been lost under the strain of extreme temperatures. The writer urges the importance of making a most careful record of the temperature in all cases of rheumatic fever, and of recognizing at once the earliest indications of approaching hyperpyrexia. So soon as the thermometer shows an undue rise, there should be no time wasted over the administration of drugs, but an attempt should be made at once to check this rise by the application of cold to the surface. The result of such treatment in a favorable case is most gratifying. The patient may seemingly be dying from excessive heat-production one hour, and in the next hour may be in comparative comfort, with prospects of a speedy recovery. One bathing has frequently seemed to turn the scale.—*N. Y. Med. Jour.*

SURGERY.

EXCISION OF PART OF RIGHT LOBE OF LIVER.

On October 9 Professor W. W. Keen, of Philadelphia, removed from a patient a considerable portion of the right lobe of the liver for the excision of a cystic tumor, the entire mass taken away being about two-thirds the size of a man's fist. The woman's temperature has remained normal, or nearly so, since the operation, rising only once to 100° F. There seems every reason to believe that the patient will recover.—*News.*

TRANSPLANTATION OF THE CORNEA.

Von Hippel reports in the *Berliner klin. Wochenschrift*, xxviii. Jahrg., No. 19, his seventh case subjected to this operation. The patient had a dark-brown opacity which covered the pupil, and which had been produced by repeated cauterizations of the cornea with nitrate of silver. He also had cataract. After extraction of the opaque lens, with iridectomy, he had vision equal one-fifth, but he insisted on the removal of the spot on the cornea. The corneal tissue, down to Descemet's membrane, was removed from a circle four millimetres in diameter, and replaced by the full thickness of the cornea from a young rabbit. The eye was afterward dressed with iodoform and both eyes bandaged. Although there was temporary clouding of the thin layer of original tissue behind it, the transplanted flap remained clear. In two weeks the epithelium was continuous from the cornea to the flap. After discission for a secondary cataract, the patient obtained vision equal one-third. It does not appear from the report that the transplantation caused any improvement in vision. But the operation deserves to be called successful in that it secured the continued life and health of the graft, and removed an unsightly scar.

TREPHINING IN A CASE OF GENERAL PARALYSIS.

M. Rey reported a case in which he thought the disease was benefited by the intervention of the surgeon. The dura mater presented no unusual appearance. Beneath the meninges the large vessels presented a gelatinous aspect and showed milk-like plates. The brain formed a hernia which filled up the opening in the skull. A rapid examination was made. The incisions in the dura mater were there reunited by sutures, as were also the rents in the pericranium.

The operation, which lasted an hour, was performed under strict antiseptic precautions. On awakening, the patient was quiet and contented. Eight days later, the cicatrization of wound was completed and the patient returned to ward. A month and a half later he returned to his family, the states of depression and exaltation having disappeared.

Mr. Rey remarks that cases of this kind may be benefited by the surgeon, even though there is no tumor or irritation of the brain, just as cases of symptomatic or essential epilepsy may de benefited. The incurability of general paresis and the recognized futility of internal treatment justify this operation. —*Le Progrès Médical*, August 15, 1891.

AN EASY METHOD OF PLUGGING FOR EPISTAXIS.

Dr. A. A. Philip describes a ready method of plugging the posterior nares, which in his hands is both effectual and easily accomplished. (*British Medical Journal, July* 18.) A piece of old, soft, thin cotton, oiled silk, or silk, about six inches square—a piece of an old handkerchief will answer—is taken, and by means of a probe, mental thermometer

case, or penholder, is pushed, "umbrella" fashion into the nostril, the direction of pressure, when the patient is sitting erect, being backward and slightly downward. It is pushed on until it is felt that the point of the "umbrella" is well into the cavity of the naso-pharynx.

The thermometer case is now passed on in an upward direction and then toward the sides, so as to push more of the "umbrella" into the pharynx, and is then withdrawn. The closed end of the sac protrudes well into the pharynx, and its open end protudes at the anterior nares. The inside of the sac may be brushed with some astringent, such as alum or turpentine.

A considerable quantity of cotton wool is pushed well back to the bottom of the sac in the pharynx. Then, the thermometer case being held well against the packed wool, the mouth of the sac is pulled upon, and thus its bottom is drawn forward, and forms a firm, hard plug wedged into the posterior nares. The sac may now be packed full of cotton wool, dry or soaked in some astringent solution. The mouth of the sac is tied just outside the nostril, trimmed with scissors, and the ends of the thread secured outside.

In removing the plug, open the mouth of the sac, and, with small dressing forceps, gently remove the cotton-wool bit by bit. If there is bleeding, simply syringe the sac with weak carbolic lotion or Condy's fluid, and repack with clean cotton-wool. If there is no bleeding when the wool is picked out, gently pull out the sac, or if it be adhering to the mucous membrane of the nostril, apply a little warm water, and it may then easily be removed.

By this method no damage is done to the floor of the nose or back of soft palate by strings, etc., no disagreeable hawking, coughing or vomiting takes place during introduction, and no disagreeable strings are left hanging inside the mouth.

POSTURE IN THE REDUCTION OF HERNIA.

I had, on Saturday evening last, a case which well illustrated the principles set forth in Dr. George H. Taylor's article, published in the *Journal* for April 25th.

About seven o'clock of the evening aforesaid I was called to see Mrs. R., who that evening had been digging in the garden. An hour or an hour and a half before my arrival she had developed a right, direct inguinal hernia. I found her with a hernia half as large as my fist, hard, tense, and painful; with great pain in the bowels and vomiting. After careful manipulation, finding that it would be impossible to reduce the hernia by taxis, I gave her repeated hypodermics of morphine sulphate to relieve the pain, subdue peristalsis, and prevent tympanites; elevated the hips on a board; applied ice to the tumor; and made repeated pressure, or "pulls," upon the bowels toward the diaphragm. A few minutes sufficed to produce a somewhat lessened tension in the tumor, and I felt that it would only be a question of time when reduction could be effected. Gradual diminution took place, and, finally, at 10.30, spontaneous reduction of the bowel took place, a portion of the sac still remaining down, but the latter was easily returned. I feel confident that this case could not have been relieved by taxis in the ordinary way, but a combination of taxis, posture, anodyne, and antiphlogistic easily effected a cure.

It is quite likely that many other cases, such as we have heretofore been accustomed to operate upon, might be relieved in the same way. There is, of course, nothing new in the postural treatment of hernia, *e. g.*, the hanging a man by his legs over the shoulders of another man—and then taxis. It is only in the application of the principle; the combination of gravity, atmospheric pressure, reversed rhythmical respiratory action; external abdominal pressure with the operator's hand, and persistent, patient waiting.—Dr. Thomas A. Elder, in the *N. Y. Med. Jour.*

GYNÆCOLOGY.

GONORRHŒA IN THE FEMALE.

Bumm (*Centralblatt für Gynäkologie*, 1891, No. 22) thus summarizes the results of his studies of this subject, which extend over a period of ten years:

1. Gonorrhœa in women is a process limited to the superficial layer of the mucosa; the cocci invade the epithelial layer, but are always arrested when they reach the submucosa. The epithelium is originally cast off by reason of the active suppuration, but is quickly renewed, assuming the pavement form; after this change has occurred the active invasion of gonococci is usually arrested, but they continue to grow in the secretion, in which they may persist for months and years.

2. The gonococci have no connection with septic processes; they do indeed cause

suppuration of the mucosa, but are destroyed when they reach the subjacent connective tissue. If sepsis develops it must be in consequence of mixed infection; septic germs are frequently present in gonorrhœal pus, and a favorable nidus for the reception of external germs is offered by the purulent genital secretion.

3. The urethra and cervical canal are the favorite seats of gonorrhœal infection; acute gonorrhœa of the cervix gives rise to symptoms only at the outset, but after it has become chronic it may exist for years without causing disturbances, unless it extends to the corpus uteri and thence to the tubes.

The cocci possess no power of spontaneous movement and extend only short distances by proliferation. Extension over larger surfaces must be through the agency of the secretion. Normally the cervical secretion cannot pass the os internum, which also serves as a barrier to the entrance of the specific infection. Menstruation favors the admission of cocci into the uterine cavity, also certain mechanical causes, such as coitus, the introduction of sounds and intrauterine medication; lastly, this is liable to occur during the puerperium. After they have reached the cavity they again remain stationary, and probably are only carried into the tubes from the causes already mentioned, the puerperium being the most favorable time, as the proximal openings of the tubes are then more patent. In fifty-three patients with gonorrhœa, who were kept under observation for at least five months after the initial symptoms developed, the cervix was infected in 75 per cent., the corpus uteri in 15 per cent., and the tubes in only 3.5 per cent.

Wertheim (*Centralblatt für Gynäkologie*, 1891, No. 24) reviews the subject of so-called gonococci-peritonitis, the existence of which is denied by Bumm, who affirms that when the cocci comes in contact with the peritoneum they are simply encapsulated like any other foreign bodies, the development of peritonitis secondary to gonorrhœa of the tubes being due to mixed infection. Subsequent microscopical studies have shown that the cocci may penetrate the squamous epithelium which covers serous surfaces. Their absence in the exudates of peritonitis is no proof that they may not have originated the inflammatory process prior to their disappearance. After a thorough investigation of the subject, he finds as the result of numerous experiments upon animals that the coccus may, under the same conditions, produce peritonitis the same as the other pyogenic microörganisms. Now, it may be urged that experiments on animals do not form a reliable basis on which to found a theory as to the development of this form of peritonitis in the human subject; but, as an actual fact, mucous surfaces in the former are less sensitive to the action of the cocci than those of man, hence in the latter peitonitis would be more likely to occur from contact with them. Not only may the gonococci penetrate squamous epithelium, but they may make their way into the subjacent connective tissue and there enter the lymph-spaces, extending in the same manner as other pyogenic organisms. This is an important fact, since heretofore all inflammations of the deeper tissues accompanying gonorrhœa have been referred to mixed infection; now, peri-urethral abscesses, suppuration of the glands, parametritis, and even oöphoritis, may be regarded as due directly to the influence of the gonococcus. It is a striking fact that no one has ever found any other pyogenic bacterium except the gonococcus in the contents of a pyosalpinx, even though the condition was complicated with extensive inflammatory changes in the tubes, ovaries and peritoneum.

The writer has found the coccus in the pus from sixteen cases of pyosalpinx, but never succeeded in discovering any other form of microörganism, even after the most careful search; there is no reason to infer from this that other bacteria are supplanted by the cocci, since Menge has shown that the former possess a much greater power of resistance than the latter. The writer has also disproved, by numerous culture experiments, Zweifel's assertion that old gonorrhœal pus forms a particularly favorable nidus for pyogenic and septic organisms; the reverse seems to be the case. It seems only fair to limit the term "mixed infection" to those cases in which, after a distinct preceding gonorrhœal infection, the presence of organisms other than gonococci can be demonstrated; of these the writer has seen but two undoubted examples. Abscesses of the ovary may be divided into two classes, according to their etiology—puerperal and gonorrhœal. The former are not uncommon; the *streptococcus pyogenes* is usually found in the pus. That ovarian abscess may be of gonorrhœal origin is proved by a case cited by the writer in which a girl of sixteen had a double pyosalpinx and abscess of both ovaries; in the contents of the right abscess-sac numerous gonococci were found, while the pus from the left one contained no bacteria whatever. —*Amer. Jour. Med. Science.*

RESECTION OF THE OVARY.

At a meeting of the Surgical Society of Paris, July 29, 1891, M. Pozzi read a paper on the above subject. He stated that it often happens that the ovaries are only partially diseased. It has been proposed, in these cases, that only the affected portions be removed; that is to say, resection of a portion of the ovary. Schroeder has already done the operation for dermoid cysts, others for sclero-cystic lesions, although more often total removal has been practiced for the latter condition.

Pozzi has recently made two resections of the ovary; the operation is a simple one, and attended with the best results. It may be asked: What is the ulterior result of this conservative operation as regards fecundation? It must not be forgotten that every portion of an ovary is capable of producing an ovule. Nevertheless, he would only advise resection of the ovary when the Fallopian tube is permeable.

In one patient he found sclero-cystic ovaries on both sides, prolapsed and bound down by adhesions. The tubes were twisted. He took considerable care in loosening them from their adhesions and in proving that they were permeable. This done, he removed one ovary, and from the other he removed the middle third. Like a quarter of an orange. A catgut suture restrained haemorrhage and assured coaptation of the surfaces. He than adjusted the fimbriated extremity of the tube over the surface of the ovary, and fixed it with four points of catgut suture.

The obliteration or evident alterations in the tube, by pyosalpinx or other disease, would prove an absolute obstacle to the passage of the ovule, and should constitute a contra-indication to this operation.—*Le Semaine Médical*, August 1, 1891, p. 310.

OBSTETRICS.

HYPEREMESIS GRAVIDARUM AS A MANIFESTATION OF HYSTERIA.

German journals have lately been occupied with a discussion between Ahlfield and Kaltenbach as to the priority of having pointed out the connection between the pernicious vomiting of pregnancy and hysteria. It has been recently shown, however, that Friedreich, as early as 1878, declared the vomiting of pregnancy to be a neurosis, and recommended large doses of potassium bromide as the best treatment. Cohnstein (*Centralblatt für Gynäkologie*, No. 36, 1891) reports success with this treatment, but very properly admits that even though in the beginning the disease may be a pure neurosis, it may quickly progress so far as to be beyond a treatment by nerve sedatives alone, and further that in cases of pernicious vomiting in pregnancy dependent upon some abnormality of the stomach or intestinal tract the nervous sedatives are not to be depended upon.—*Univ. Med. Mag.*

DOUBLE UTERUS; PREGNANCY; ABORTION AT THIRD MONTH.

Dr. Thaddeus A. Reamy (*Amer. Journ. Obstet.*, July, 1891) reported the following case before the Obstetrical Society of Cincinnati. The patient was aged 25; she had borne three children, the youngest being 13 months old. The period ceased on November 29th, 1990. Nausea set in and caused emaciation. On January 21st, Dr. Schoolfield was called in, as she was suffering intense pain in the right inguinal region, with shock but no vaginal "show." A mass was felt to the right side of the uterus, extending to the fundus. Dr. Schoolfield had no doubt that pregnancy existed and, but for the absence of hæmorrhage and decidual membrane, would have felt sure that it was ectopic. On February 10th the patient was anæsthetized. The sound could be passed to a depth of but 3½ inches, the uterine cavity being empty. Two days later Dr. Reamy explored the parts. At first he penetrated the same cavity that had already received the sound; it measured 3½ inches. Withdrawing the sound, he turned its concavity towards the right side, and without difficulty introduced it to a depth of more than 5 inches. While it was thus introduced, he found no difficulty in carrying the uterus to the middle line by aid of the sound and of the hand placed externally. The abdominal wall being very thin, the outline of the uterus was easily distinguished. It was not difficult to detect a foreign body in the right cavity. Manipulation by the sound, with the deliberate purpose of inducing an abortion, Dr. Reamy then withdrew the instrument, and advised that the patient should be kept at rest. On the next day Dr. Schoolfield found a fœtus, of nearly three months' growth, expelled into the vagina. The placenta was removed without difficulty and the uterine cavity washed out with a bichloride solution. Taking advantage of the dilated condition of the internal os, Dr. Schoolfield explored the uterus with

his finger and detected a firm antero-posterior septum extending from the fundus to a point corresponding to the ring of Bandl, thus clearing up some obscure points in the diagnosis. The patient recovered. Dr. Reamy, in conclusion, observed that, according to modern teaching the facts that pregnancy existed, that a mass lay to the right side of the uterus and that the patient had been seized with sudden pain and shock, would have justified an immediate abdominal section. The subsequent events showed that such a procedure would have been wholly unjustifiable.—*Brit. Med. Jour.*

CURIOUS CAUSE OF PUERPERAL FEVER.

Professsor Paramuchi has reported a case of puerperal fever in which a very unexpected cause was brought to light—that is to say, the putrid remains of a tapeworm in the uterus. No untoward symptoms seem to have occurred until the tenth day after delivery, when the patient became feverish and prostrate and lost her appetite. The lochial secretion was very foul. Large doses of quinine were ordered, but no effect was produced on the temperature, which the next day was 104.2°. The uterus was consequently washed out, two catheters being used for the purpose, as a regular uterine instrument was not at hand. The outlet catheter, after discharging some very fœtid fluid, was choked up by what was found to be a putrid tapeworm. This was of course removed and sublimate irrigations given, and the symptoms soon disappeared. Regarding the question of how the tapeworm came to be in the uterus, inquiries elicited the fact that a few days before her confinement the patient had been suffering from dysenteric symptoms, and, in view of her condition had not taken any medicine. It is probable that the worm managed to migrate after delivery from the rectum to the vagina, and that there it died and became putrid.—*Lancet.*

PÆDIATRICS.

TETANUS NEONATORUM OF ST. KILDA

St. Kilda is a small island of the Hebrides group on the West coast of Scotland. It lies far out at sea, and the population consists of but eighteen families. From time to time the prevalence of tetanus neonatorum on the island has been noticed. A description of the disease has recently been published by a nurse who has spent a year on the island. Not more than one out of every four our five children born survives, the vast majority succumbing to this terrible malady. The trismus generally appears at about the fifth or sixth day, and coincides in its commencement with the separation of the umbilical cord. At birth the children look plump and healthy, and, so far as can be seen, no abnormality is present at the umbilicus either before or after separation of the cord. The illness begins with a low, whining cry, and usually terminates in death within twenty-four hours. The child is seized with a series of opisthotonic convulsions, in which the fists are clinched, the jaws tightly closed, and the spine curved. The fits recur every quarter of an hour until death from exhaustion takes place.

The natives are not robust. They live in small, dirty, ill-ventilated houses, with every condition favorable to the development of the disease.—*Boston Med. and Surg. Jour.*

MODERN DRUGS IN THE TREATMENT OF PERTUSSIS.

An abstract in *La Pratique Médicale*, June 22d, 1891, makes a resumé of the modern drugs employed in treating whooping-cough. Von Genser was the first to advocate antipyrin, reporting 120 cases thus treated with a mean duration of twenty-four days. Rothe, who had observed some unfavorable results with antipyrin, advocated a combination of iodine and carbolic acid in the following formula:

℞

Carbolic acid.	
Rectified spirits, aa	gr. jss.
Tinct. of iodine	gtt. x.
Tinct. of belladonna	gtt. xxx.
Peppermint water	f℥ ij.
Syrup of poppies	gr. xv.

To a child 2 years old a coffeespoonful of this is given every hour.

Love, of St. Louis, has published fifty cases satisfactorily treated with antifebrin in doses of one-half to five grains, according to age, four times daily.

Heiman has found phenacetin, in doses of one and one-half grains, for a child 3 years old, to be efficient, even when antipyrin had failed.

In 1885, Moncorvo prescribed a local treatment with resorcin, a method which was followed by Bouchut, Callias and Moriac. Several other modern cures may be mentioned to complete the list: sulphurous acid, employed by Mauby; bromoform, by Stepp, Loewenthal and H. Neuman; chloroform water, by Stepp and Shilling; terpin hydrate, by Manassé; and, finally, ouabaine,

recommended in England by Gammel.—*Univ. Med. Mag.*

THE USE OF STROPHANTHUS IN CHILDREN.

Demme reports (*Jahrbuch f. Kinderheilk.*, xxxi., Nos. 1 and 2) that a 1:20 preparation of tincture of strophanthus produces a strengthening of the systolic contraction of the frog's heart somewhat less decided than is produced by digitalis. This effect can be sustained a long time by careful dosage, but as the dosage is increased the contractile force diminishes and gradually a cessation in systole results. The toxic effect of strophanthus on the heart-muscle may occur unexpectedly and more suddenly than with digitalis, hence the necessity of great caution in administering the drug to children. Strophanthus also causes a prolongation of the diastole and a diminution in the frequency of the pulse as long as the energy of the systole increases. The author used the drug in seven cases of uncomplicated mitral disease, in five of scarlatinal nephritis, in three of exudative pleuritis, and in two each of bronchial asthma, pulmonary tuberculosis, and whooping-cough in children between five and fifteen years of age. Dyspepsia was produced in the younger children, so that the treatment could not be continued. The initial dose for children from five to ten years of age was one drop, three times daily; for older children, one drop four times daily. After four to seven days the dose was increased to three drops four or five times daily. Nausea and cold-sweating indicated a suspension of the treatment and the administration of wine, cognac, or coffee. In heart-failure diuresis was increased after three or four days, the pulse becoming slower and stronger and the breathing easier. The dropsical phenomena became less marked. The diuretic effect ceased after three or four days in five of the cases of mitral disease, and compensation could be affected only by the combined action of strophanthus with digitalis. A prompt diuretic effect was produced by strophanthus in two of the cases of chronic scarlatinal nephritis, while in the acute cases no benefit was experienced. The effect in exudative pleuritis was satisfactory, and also in the two cases of bronchial asthma, in which strophanthus was given in connection with iodide of potassium. In pulmonary phthisis no positive result was observed, but in the two cases of whooping-cough, in which there was persistent dyspnœa and œdema of the lower extremities in consequence of dilatation of the heart, the results were satisfactory. The action of strophanthus consists in elevation of the blood-pressure and favorable influence upon the respiratory centre. It can complete the action of digitalis when both drugs are given, and neither cumulative effect nor diminished activity were observed in cases in which it was used during a long period.—*Amer. Jour. Med. Sci.*

HYGIENE.

INOCULATION OF A JAPANESE WITH SCARLET-FEVER GERMS.

A. S. Ashmead, M. D., reports in the *New York Medical Journal*, September 5th, some interesting experiments made with the object of obtaining a modified lymph to prevent scarlet-fever in the Caucasian. He reports two tests of this vaccination as follows:

On May 17th I inoculated with scarlet-fever germs a native of Nagona-Ken, Japan, aged twenty-four years, three years resident in this country. There was no family history of syphilis or leprosy. The germs were taken from the desquamations on the forearm and palm of a German child, aged two years and three months, a patient of Dr. Ernst F. Ruppe. I took them on the twenty-fifth day, pursuant to a suggestion of Professor Edington, of Edinburgh. They were inserted in the left forearm.

The result of this was the development of an areole of intense scarlet, severe inflammation of throat and fauces, headache—but very slight elevation of temperature.

In a second case Dr. Ashmead states: In this second attempt I have produced a condition which may or may not be a modification of the disease, but certainly is not the disease itself.

This case was exhibited, on the sixth day after inoculation, to Drs. Lester and Wolff, at the Willard Parker Scarlet-Fever Hospital. I gave Dr. Lester some of the lymph from the arm. On the seventh day after inoculation the case was exhibited at the Hoagland Laboratory, Brooklyn, to Drs. Bristow, Van Cott and Dickinson. Dr. A. T. Bristow received various products for bacteriological culture, namely, blood from the areola, lymph from beneath the crust, and specimens of the crust itself. I have since left with Dr. Edson, Chief of Contagious Diseases Bureau, New York Board of Health, and Dr. Lester, portions of the

crust. I intend to inoculate this case again with scarlet-fever germs, obtained as before, and note whether the same results will follow.

I may observe that during the whole time of the experiment the patient was in continual relation with my own children, without any contagion taking place.

I have a half-breed child (Japanese and American), aged four, a foundling, whom I intended to inoculate with pure scarlet-fever virus. Dr. Joseph William Stickler, whose investigations in this line are well known, wrote to me in regard to this case: "I do not consider it safe to do such a thing, unless you are certain that the virus has been attenuated in strength to a degree that will render it a safe agent to use; yon cannot tell prior to inoculation just how susceptible your subject may be. Hence the impression made upon the system may be very severe, or very moderate. It may be severe enough to cause death."

I therefore do not feel justified in making this attempt. But perhaps the presumably attenuated virus obtained from my Japanese subject may be used with safety.—*Med. Age.*

ON TAKING FLUID WITH MEALS.

A great deal of misapprehension is often found to exist in the popular mind in regard to matters of eating and drinking; the cause of this to some extent is to be traced to old time sayings, which have come down to us in the form of a concentrated infusion of somebody's opinion upon a subject of which he or she was wofully ignorant. One of these misapprehensions to which we may refer is as to the injuriousness of taking fluid with meals. One frequently hears it laid down as a maxim that "it is bad to drink with your meals, it dilutes the gastric juice." By way of explanation we may remark that "it implies that the fluid taken is harmful." Whence this sagacious postulate originally came we cannot tell; it has quite the ring about it of an inconsequent deduction formed by a person whose presumption of knowledge was only exceeded by a lamentable ignorance of the subject. Medical men often find much difficulty in dealing with these museum specimens of antiquated science, for even educated persons are disposed to cling to the absurdities of their youth. Upon this matter Mr. Hutchison's remarks in the last number of his *Archives*: "I observe with pleasure that the verdict of general experience and common sense has been confirmed by scientific experiment in the matter of taking fluid with meals. Dr. Tev. O. Stratievsky, of St. Petersburg, after elaborate trials, has found that fluids materially assist the assimilation of proteids, and announces the following conclusion, which is to be hoped no future experiments will controvert—on the whole, the widely-spread custom of taking fluids during or just before one's meals, proves to be rational and fully justified on strict scientific grounds. To take fluids with the meals is almost as important an adjunct to digestion as is the mastication of solid food preparatory to swallowing it." It is obvious, however, that there is a limit to the amount of fluid one can swallow with impunity—not to speak of comfort—just as much with meals as at other times. It would be dangerous to create a general impression that fluid is good with food irrespective of quantity. It is, moreover, a well-ascertained clinical fact that an access of cumprandial fluid does retard digestion in certain people, and gives rise to discomfort in most. A little attention to one's sensations in such matters will far better fix the desirable limit than all the "data" in the world.—*Med. Press.*

HANDWRITING AND HYGIENE.

It will be remembered that at the late International Congress of Hygiene and Demography, in Section 4, which was concerned with the Hygiene of Infancy and School-life, a resolution was passed in favor of the teaching of upright penmanship or vertical writing, on the ground that spinal curvature and short sight are caused by the faulty position of the youthful student, which is necessitated by the slope of the letters. We can all of us remember the trouble of learning to write, and the mental and physical toil which the making of our first pothooks and hangers involved. The number of muscles put in action when a person is writing is prodigious, and it is probable that in beginners every muscle of the body must yield its assent before the graphic symbols trickle from the pen. The fingers, wrist, elbow, and shoulder must all be held steady. The spine must be rigid and fixed below as well as above. The pelvis must be firm, and to this end the child often gets a support by its feet from the legs of the chair. The thorax is more or less rigid, and its movements are determined more by the work of the hand than the respiratory needs. Lastly, the knit brows and protruding tongue are unconscious muscular acts which serve to mark the effort, both of body and

mind, which the child undergoes when learning to write. It is notorious that in writing our individuality asserts itself in spite of the pedagogue. We are taught certain rules for sitting at the desk and holding the pen, which we ultimately learn to neglect, and finally write in a fashion of our own. The great drawback of writing as an exercise for children is the fact that it involves one-half of the body only, and the necessity of fixing the spinal column causes the child instinctively to loll upon its left side while the right arm is working. To what extent the asymmetry of posture is caused by the fashion of sloping the letters it would be difficult to say, but there can be no doubt that the writing master ought to carefully watch the attitude of the child and endeavor to make it sit square to the desk and maintain the spinal column vertical. Every child should have a footstool to give firm support to the feet, and the seat should not be slippery, so that the fixation of the pelvis may be easy. Vertical writing is very legible, and if it diminishes to any extent the tendency to sit "lop-sided," it ought to be encouraged. The true remedy for the evils produced by learning to write seems to us to be to teach the child to use both hands, and to practice alternately with either hand. Vertical writing lends itself more readily to ambidexterity than does sloping writing, and there can be no doubt that a clerk who could write with equal facility with either hand, and could rest one side of the body while the other was working, would be little liable to writer's cramp and similar troubles. Seeing how enormous is the muscular effort involved in giving the hand sufficient steadiness, and that the brain fag is scarcely less than the muscle fag, it goes without saying that writing lessons should at first be of very short duration. Ten minutes with each hand ought to amply suffice.—*Lancet.*

MEDICAL CHEMISTRY.

DETECTION OF TIN IN CANNED FOOD.

H. A. Weber, Ph. D., has investigated the canned foods of the market, and found all of those examined by him, except condensed milk, to contain *tin.*

The method employed in the determination of the tin was as follows:

The contents of each can were emptied into a large porcelain dish, and the condition of the inner coating of the can noted. After thoroughly mixing the contents, 50 grains were weighed off and incinerated in a porcelain dish of suitable size. The residue was treated with a large excess of concentrated hydrochloric acid, evaporated to dryness, moistened with hydrochloric acid, water was added, and the mass was filtered and washed, the insoluble matter being all washed upon the filter. After drying the filter with its contents, the whole was again incinerated in a porcelain dish and the residue treated as before. The solution thus obtained was properly diluted and saturated with hydrogen sulphide. After standing about twelve hours in a covered beaker, the precipitate was filtered off, incinerated, and the tin weighed as tannic oxide.—*Journ. Am. Chem. Soc.*

THE PURITY OF PHENOCOLL HYDROCHLORATE AND OTHER SALTS.

Phenocoll hydrochlorate having commenced to be in some demand as a combined antipyretic and anodyne, it may be useful to record one or two tests for its purity and that of other salts of phenocoll. It is stated (*Pharm. Zeit.*, September 19th, p. 586) that half a grain of phenocoll hydrochlorate should dissolve clear in about 12 c.c. of water, and that the solution should not turn ordinary litmus paper blue. Solution of ferric chloride should produce in the phenocoll hydrochlorate solution only the faint yellowish color of iron salts, but not a red coloration even upon warming.

Heated to 60° C. and treated with a few drops of solution of sodium carbonate, the aqueous solution should not give off the odor of ammonia; with a few drops of caustic soda solution the phenocoll base should be thrown down as a white crystalline mass. Burnt on platinum, phenocoll hydrochloride leaves no residue.

For the acetate the same tests apply, except that the aqueous solution is faintly alkaline and the behavior with ferric chloride is not the same. The free base melted under water and allowed to cool solidifies in crystals; it is also precipitated from a dilute aqueous solution by sodium chloride in long, silky needles. Melted with caustic soda, ammonia and phenetidin are formed, and when an aqueous solution is boiled with a few drops of hydrochloric acid for a few minutes it shows faintly the reactions of phenacetin treated similarly.—After *Pharm. Journ.*

PURIFICATION OF THE NILE WATER BY BOILING, IN THE MIDDLE AGES.

Ebn-Radouan-el-Masry, writes Dr. Elloui-Bey in a paper in the *Lyon Medical*, an Egytian physician who flourished in the fifth century after the Hegira, writing A. D., 1068, says:

"The waters of the Nile, to be fit to be used for alimentation, should be drawn where the current is swiftest, for they then contain the least quantity of decomposed matter in suspension, as in the locality known as Rhom-el-Ahmar (now known as Old Cairo), just above Gihzeh."

"The water thus drawn should be submitted to especial operations for its purification, according to the temperament of the consumers. For those who are oppressed with the summer heat, it will be found useful to clarify it by stirring into it chalk, Armenian bole, the bruised seed capsules of the lotus, and vinegar. Those who feel the cold of winter severely prefer to use bitter almonds, thyme, anise, etc. After letting it stand until everything in suspension is carried to the bottom by the clarification above mentioned, the water should be decanted, and is then ready for use."

"It may also be purified by simply filtering it through vessels of unglazed pottery. Another means of purification consists of heating the water over the fire and subsequently exposing it to the night air. If all impurities are not thrown down to the bottom of the vessel, decant the clear part and boil it again. If after this second cooking the water still has a disagreeble taste, it should be brought to a boil, exposed to the night air, and finally clarified by some of the means mentioned above.

"But the best means of freeing water from all principles hurtful to health is without doubt to boil it, to expose it afterward to the cool night air, decant from the sediment, boil again, to purify by one of the means first mentioned, and finally to filter through a filtering vase exposed to the night air. Water thus treated is fit to be used as an aliment. Such water should be preserved during the summer in vessels of burnt clay, or of cooked earth made in the month of Touba (January), in leather vessels of Hedjah, or in any other refrigerating vessel. In summer, water for the day's use should be exposed on the ground floor with the windows opening to the north."*

"But in winter it should be kept, by preference, in warm places, in glass vessels, or clay vessels made in summer time.

"To make water more refreshing we may mix with it a little rosewater, or, better still, put a little chalk into it, the seeds of the white poppy, or of *moghra* (mixture of iron oxide and clay), tied up in a bit of linen in such manner that the water can acquire freshness by contact with these substances without being rendered muddy by them.

During summer time all vessels destined to contain water should be frequently cleansed by first rubbing with broken pottery, and then by barley flour, purslane, and sandalwood. Finally, they should be submitted to fumigations of camphor and sandalwood. In winter such vessels should be rubbed with alkalies and rushes, and fumigated with gum mastic and *aloud* (a resinous wood having an odor resembling guaiac).

"Nile water becomes completely unfit for drinking purposes at the time of the overflow, and when the current becomes very slow at the decrease of the waters. In these two cases it should be boiled and clarified with extra care, and bitter almonds and other substances which destroy its viscosity should be used for its clarification.

"The Nile furnishes, on the contrary, water of excellent quality at all points, during the month of Touba, or in full winter. The Egyptians are not slow to find this out, and a great many of them draw sufficient to keep them in supply for the remainder of the year. They preserve it in large vessels of glass or porcelain. They claim that it is insusceptible of deterioration, and consequently take no precautions of purification of it, maintaining that it is always good. But thou must not follow their example. Take no faith in their say-so, and clarify the water whatever be its state, since thou must know that water thus kept is undoubtedly subject to alteration."

So far we quote Ebn-Radouan. Pasteur, Koch, and their disciples of to-day, after having studied the matter with all the aids of science and all the instruments of our civilization have gotten but little further. Their dictum is to *filter and expose to heat* all waters from open rivers to be used for human alimentation. Ebn-Radouan was 830 years ahead of them.

* The north wind in Egypt, blowing over the Mediterranean and from the cooler European shores, is the most refreshing.

PIPERAZINE AND PHENOCOLL

Are now sometimes given in combination, phenocoll as a symptomatic, to allay pain, piperazine as the curative by virtue of its solvent action on uric acid.

NEWS AND MISCELLANY.

THE LATE DR. S. R. KNIGHT.

At a meeting of the present and former members of the medical staff and ex-residents of the Episcopal Hospital held at the College of Physicians, November 21st, the following minute was adopted:

"The present and past members of the medical Staff of the Episcopal Hospital and its former resident physicians desire to express the deep regret which the death of Dr. S. R. Knight has caused them. All of the many who have been associated with him in his long service as Superintendent of the Hospital feel that they have lost a sincere and honest friend. They remember the kindly advice, the shrewd help and counsel that he had always ready for their difficulties, professional and personal, his constant interest in all the varied work of the institution, and the wisdom with which he made his own duties at once an example and an opportunity to the younger men in the sphere of their labors."

MANUFACTURED EGGS.

The contribution which the hen makes to breakfast possibilities would seem hard to imitate, yet it is freely stated in English journals that the industry of manufacturing eggs has attained large dimensions in that country, and further, that the manufactured article is for most purposes as good as the genuine.

THE AREA AND POPULATION OF THE GLOBE.

The recent publication of the *Bevölkerung der Erde*, of Drs. Wagner and Supan, by Perthes, of Gotha, gives us the most reliable information as to the area and population of the earth now obtainable. The estimate for the total population of the earth in this present year is 1,480 millions, or an increase of 46 millions over the estimate for 1882, when the last edition of these statistics was published. The exact enumeration of 835 millions (about 56 per cent. of the whole population of the globe) has now been accomplished by census or registration. The population of the chief divisions of the globe is, in round numbers: in Europe, 357 millions, giving 94 inhabitants to each square mile of area; Asia, 825 millions, or 47 to the square mile; Africa, 163 millions, or 14 to the mile; America, 121 millions, or eight to the mile; Australia, 3 millions, or 1 to the mile; and in the Oceanic Islands, 7 millions, or 10 to the mile. In Europe, Belgium exceeds all other countries in density of population, with 530 persons to a square mile; next follows Holland, with 365; and the United Kingdom, with 312; but whereas in England the density is 480, in Scotland it is only about one-fourth, and in Ireland about one-third that of England. In Norway and Finland, the most thinly populated countries of Europe, there are only about 16 persons to the square mile. Of China the estimate is 361 millions, giving a density of about 77 to the square mile. It is in respect of Africa that the greatest doubt necessarily exists. These statistics make it manifest that there are still vast areas of the habitable surface of the earth almost, if not quite, unpeopled; and which will for many a long year to come receive the surplus millions of Europe and other parts of the globe in which the density of population is most keenly felt.—*Brit. Med. Jour.*

A BUDDHIST TREATISE ON MEDICINE.

All those interested in the history of medicine, and particularly Indian medicine, will hail with scholarly delight, says the *British Medical Journal*, the announcement that an old Sanscrit treatise on the healing art has recently come to light under somewhat remarkable circumstances. The "find" is in itself hardly of such value as the work of Aristotle not long ago exhumed from the grave of oblivion in which it had lain so long entombed; but your true Dryasdust cares little for the literary or scientific quality of his treasure trove, if it but have the consecrating seal of hoary antiquity upon it. Last year, it will be remembered, Lieutenant Bower was fortunate enough, in the course of an exploring expedition in Kashgaria, to light upon a buried city in the neighborhood of Kuchar. Among the other antiquarian treasures found there was an ancient birch-bark manuscript, which was presented to the Asiatic Society of Bengal. The manuscript, which consists of thirty-three leaves closely written over on both sides, is in Sanscrit verse, and in the character known as the Nagari alphabet, of which three varieties occur in different parts of the work. The manuscript has been translated by Dr. Rudolph Hoernle, and appears to be a compendium of medicine, bearing the title of "Navanitaka," and divided into sixteen chapters. The author seems to have been a Buddhist, but, with a modesty not always found among medical writers, he has concealed his name so carefully that Dr.

Hoernle has not, up to the present, succeeded in discovering it. The work is divided into sixteen chapters, which are devoted to clysters, elixirs, eye-washes, hair-dyes, bitumen, castor-oil, women and children, etc. The prescriptions which are given in verse, recalling to the profane mind the gnomic scraps of clinical and therapeutic lore quoted by Albert Smith in his "Physiology of the Medical student," celebrate the wondrous effects of clarified butter, which our Buddhist brother seems to have considered the "sovran'st thing on earth" for all manner of bodily ailments. A draught containing this panacea, together with oil, treacle, vinegar, and ginger, will, we are assured, instantly conjure away the most acute lumbago. An ointment composed of thickened goat's milk and wheat flour, to which sesamum may with advantage be added, is a specific for gout and rheumatism. In addition to the pharmacological and therapeutic precepts which the work contains, the reader has, it need hardly be said, a goodly *armamentarium* of charms and spells of approved efficacy applied to him, so that if medicine fails, recourse may be had to the "faith cure." The date of the manuscript is fixed by Dr. Hoernle between 450 and 550 A. D. It is thus, so far as is known, the oldest Indian written book in existence.—*Med. Rec.*

SCHENCK'S PULMONIC SYRUP.

It is said that Schenck's Pulmonic Syrup consists of wormwood, catnip, tansy, hyssop, hoarhound, hops, chamomile, comfrey, senega and elecampane, of each four drams. Boil with sufficient water to make, after straining, one quart; add gum arabic one and one-half ounce, and licorice one and one-half ounce. Then add one good sized Indian turnip, and finally sugar three pounds, brandy one-half pint, juice of two lemons. This is evidently based on a poly-pharmaceutical perscription of the early nineteenth century.

SYPHILIS IN THE UNITED STATES.

It is stated on good authority that the number of persons affected with syphilis in the United States at the present time is about 2,000,000.

At the close of the World's Fair at Paris, it was stated that that city had within its limits, 50,000 women with syphilis. We have no means of knowing how many syphilitics there were in America before the World's Fair, or how many so afflicted resided in Paris before that eventful period, or neither are we able to estimate the number of persons from America who visited Paris on that occasion; hence we can only dismiss the subject after having stated facts and figures, as it is our duty to do.—*Med. Rev.*

THE CONSUMPTION OF TOBACCO IN FRANCE.

Last year French smokers consumed 4,600,000 francs worth of cigars, 10,000,000 of cigarettes, 29,000,000 of snuff, and 91,000,000 worth of pipe tobacco. The greatest snuff-takers are old peasant women and priests. Snuff is often allowed to Sisters of Charity, as it renders the nose insensible to the bad smells of slums and hospitals, and acts as a disinfectant of the air taken in by the nostrils. The greatest number of pipe-smokers are along the coast from Nantes to Calais. Fisherwomen as well as sailors use the pipe. The consumption of ladies' cigarettes rose from 101,900 francs to 800,000 francs last year, and the orders received at the tobacco manufactory promise a still further increase under this head. There is one anti-tobacco society in France.—*The Sun.*

WILD AND CULTIVATED HERBS.

At the recent meeting of the German Scientific Congress Dr. Schweissinger, of Dresden, read a paper dealing with the examination of a few narcotic herbs, showing the effect upon their alkaloidal value. The results obtained, so far as henbane is concerned, practically corroborate Mr. Gerrard's work. They are as follows:

	Per cent. alkaloid.
Herb. aconiti, wild	0.58
" " cultivated	0.60
" belladonnæ, wild	0.40
" " cultivated	0.17
" hyoscyami, wild	0.085
" " cultivated	0.070
" stramonii, wild	0.32
" " cultivated	0.26

Dr. Schweissinger extracted the herbs with water acidulated with sulphuric acid, evaporated, removed pectin by filtration, then added ammonia, and extracted the alkaloid with ether-chloroform, checking the result by titration. In the course of the discussion it was stated that wild stramonium is preferred in Germany, and Mr. Dieterich mentioned that cultivated belladonna and henbane yield not only very good extracts, but extracts which are rich in alkaloid.—*Chem. and Drugg.*

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Clinical Lecture.

PISTOL BALL LODGED IN AND REMOVED FROM THE NECK OF THE FEMUR—UNDESCENDED TESTICLE REMOVED—APPENDICITIS; OPERATION.*

BY THOMAS G. MORTON, M. D.,
ATTENDING SURGEON, PENNSYLVANIA HOSPITAL.

Gentlemen :—On the first of September this patient, aged 29, then at Newport News, Virginia, received a shot from a revolver; the ball entered the left thigh about three inches to the inner side of the great trochanter on the anterior face of the thigh; two attempts were made at the time to remove the ball, and on the fourth day the man came to the Hospital.

When admitted, his temperature was 101°; the tissues of thigh were swollen and much inflamed, and unhealthy pus was discharging from the wound. A probe carried in deeply at right angles to the femur, came in contact with bone.

I made a six inch incision, and following the bullet track, at considerable depth came upon a pus collection; on reaching the neck of the femur, found the ball had entered and evidently lodged in the bone; there was no other solution of continuity.

With a chisel and a gouge the track in the neck of the femur was opened up and the ball was found about an inch and a half above where it had entered; it was with difficulty displaced and then extracted. The wound was thoroughly curetted and cleansed.

You will notice that there is yet a small amount of discharge from the wound, but it is quite healthy.

In looking over the literature of the subject, I am unable to find any record of a ball penetrating and lodging in the neck of the femur and being removed; Hennen states in his Principles of Military Surgery, that he has seen "balls lodged in every part of the femur, head, neck and shaft, but in all such cases after the most careful examination it was impossible to establish the diagnosis during life."

The records of the Crimean war and of the war of the Rebellion do not, it appears, present a similar case to the one before you.

The ball is a conical one and weighs 136 grains; it is considerably flattened and distorted.

UNDESCENDED TESTICLE REMOVED.

This boy has been suffering a long time from a small tumor in the groin; on examination I find that upon the same scrotal side the testicle has not descended, and undoubtedly the tumor at the external abdominal ring is this organ; usually we find the testicle more or less atrophied when it is not in its normal position, and this case is no exception. From its unnatural position it has become very painful and is constantly subjected to pressure which gives pain. It is well to remember that malignant disease very commonly attacks such undescended organs so that extirpation is generally advisable.

In performing this operation the skin is freely divided, and in doing this the organ is exposed. You see it is somewhat atrophied, and so firmly attached to the external ring that I cannot displace it, and it is better to get rid of it altogether,

The operation consists in dividing the skin as in the ordinary hernia operation, and then carefully ligating the cord, before removing the organ, then closing the wound by gut sutures.

RELAPSING APPENDICITIS; EXCISION OF THE APPENDIX IN THE INTERVAL BETWEEN ATTACKS; RECOVERY.

I now direct your attention to a useless and dangerous organ found in the abdominal

*Delivered at the Pennsylvania Hospital, October 10, 1891.

cavity, known as the vermiform appendix, which is rudimentary in man, but in some animals is of large size and performs an important function in digestion. The appendix is liable to irritation, inflammation and perforation; indeed it is subject to the same maladies as the intestine itself, of which it is a part. The occurrence of inflammation and perforation is commonly due to the presence in the appendix of some foreign body, which may be soft or hard, made up of fæcal matter or it may be some hard substance which has been forced into it from the cæcum; simple catarrh of the mucous membrane of the appendix may cause swelling of the organ, a retention of the secretions, ulceration and perforation; the result of a perforation of the appendix is peritonitis and abscess. Until very recently little or nothing was done surgically for such cases; most died; in others the abscess being shut off from the abdominal cavity, found its way either to the surface and there discharged, or to some internal organ, the bladder or intestine.

You will appreciate how recently attention has been given to the surgery of the appendix when I tell you that the first operation for its premeditated and successful removal was done by me as recently as March 1887.

The appendix varies in length from an inch and a half to several inches. Here is a specimen from our museum, nine inches long; authentic cases are recorded of absence of the appendix; the late Professor Joseph Leidy, under date of February 27th, 1891, in a note to me, says: "I have observed the appendix varying from about three to nearly six inches in length, but have never seen such a case in which it was absent. In the infant it appears to be less abruptly an extension of the cæcum, that is to say, from the subsequent greater proportionate enlargement of the latter, the appendix becomes a more abrupt extension."

To show you how frequently the appendix contains foreign material, I would say that in a number of post-mortems made in this Hospital, the appendix generally contained concretions; in several there was only a single mass, while in the others there were several. The appendix in its muscular contractions may expel its contents, but now and then being unable to do so, irritation ensues, and as time goes on, inflammation and its results follow.

In appendicitis, relapses are not uncommon, and at variable periods, and in such cases, since the case is generally retained substances, and as perforation is liable to occur at any time, the removal of the organ should be considered in the interval between attacks, for obvious reasons, and the appendix can always be found directly under a point, two inches on a horizontal line from the anterior superior spinous process; this I pointed out some time ago, and you will find this direction an important one to remember.

The case I now present to you is one of this character; the patient, a man of 26 years of age, had an attack of pain in the right iliac region in February last; he soon recovered from this, was in this hospital with a more severe attack in June, and in August a third attack. He was recently admitted with a small, hard tumor directly over the appendix which was unquestionably an enlarged organ with a retained foreign body. After a lateral section the appendix was found enormously enlarged, tightly bound to the cæcum from which it was with difficulty separated sufficiently to allow a ligature to be placed near its cæcal attachment. On opening the appendix this stone was found; it measured an inch in length and one inch and a half in circumference. The walls of the appendix were greatly thickened.

PERITONITIS FROM PERFORATION OF THE APPENDIX; PERICÆCAL ABSCESS; EXCISION OF APPENDIX; RECOVERY.

I now show you another case in which I recently operated. This boy aged 10 years, a Hungarian, from whom, or his friends, but little history could be obtained, was admitted with symptoms of pericæcal inflammation. He had, shortly before admission eaten an enormous quantity of fruit, had sick stomach and pain; when brought here he had local peritonitis, involving the appendix region. Symptoms of pus formation soon presented; irregular temperature; general abdominal swelling and pain, most intense over the right iliac region; constipation, chills and rigors. An abdominal section brought in view a large abscess and an appendix gangrenous at its extremity, in which there was a hard, fæcal concretion. The abdominal as well as the pus cavity were cleansed, and a glass drain was inserted into the pelvic cavity, and one into the abscess cavity; at short intervals the drain tubes were cleansed, using peroxide of hydrogen freely. So soon as the secretions become odorless, they should be removed. At once after the introduction of a drain tube into the abdominal cavity, lymph is thrown out around it which shuts it out

from the general cavity, forming a lymph tube, so that when the drain tube is removed any further secretion readily and safely reaches the surface.

COMMUNICATIONS.

THE MEDICAL TREATMENT OF CYSTITIS.*

BY JAMES TYSON, M. D.,

PROFESSOR OF CLINICAL MEDICINE, UNIVERSITY OF PENNSYLVANIA.

The medical treatment of cystitis does not furnish a very satisfactory chapter in therapeutics. It includes such treatment as the physician is called upon to use supposing the exciting cause, such as a stone or obstruction in the urethra, to have been removed, whenever possible. I say when possible, because the enlarged prostate which is responsible for so many cases of cystitis is, in the vast majority of cases, not removable even in these days of brilliant surgical results. It must also include the treatment of a certain number of cases in which no removable cause is ascertainable, as well as cases where, as with a long previous gonorrhœa, the cause has long since been removed, but has left a deep-rooted tendency scarcely eradicable.

It should be stated, too, at the outset, that the vast majority of cases of so-called cystitis are inflammations of the neck of the bladder and of that part of the urethra passing through the prostate.

Acute cystitis is far less commonly met by the physician than the chronic form, while its treatment is far simpler, and, I may add, more satisfactory, at least so far as the removal of the acute symptoms is concerned. Rest in bed is a primary and essential condition. Leeches to the perineum should be applied more frequently than they are. A poultice to this same region and over the abdominal region is always useful, while a brisk saline cathartic should never be omitted.

As the feverish state which always accompanies cystitis is more or less constantly associated with a scanty urine, concentrated and irritating to the inflamed mucous membrane, it is desirable at once to increase the secretion, and thus dilute it. Copious libations of pure water, to which the citrate or acetate of potassium is added, in fifteen to twenty grain doses for an adult, should be allowed. The ordinary spirits of nitric ether in two drachm doses every two hours is an admirable adjuvant, and may be combined with the officinal liquor potassii citratis, which contains about twenty grains of citrate of potassium to the half ounce. Formerly the mucilage of flaxseed or flaxseed tea was much used as a diluent menstruum for the diuretic alkalies indicated, but I am doubtful whether it is any more efficient than a like quantity of water.

Where there is much pain and straining, as is often the case, especially where cantharides is the cause of the inflammation, opium is indispensable, always in the shape of a suppository, half a grain to a grain of the extract being thus administered, or a proportionate amount of morphine. Iced water injections into the rectum, or pieces of ice similarly applied, are very efficient in allaying the pain and irritation where additional measures are needed.

The successful treatment of *chronic cystitis* is a much more difficult task, for three evident reasons: 1st, the constant presence in the bladder of the urine with its irritating qualities, especially to an inflamed mucous membrane; 2nd, the difficulty in getting remedies to reach the inflamed surface; and, 3rd, the pent-up inflammatory products, which in their decomposition often make the urine still more irritating by exciting in it ammoniacal changes. There is no doubt that, if the urine could be kept from entering the bladder during the existence of an inflammation, the latter would rapidly heal; that cure would be facilitated by obtaining ready escape for the pus and mucus formed in the inflammatory process; while happier results might also be reasonably expected if we could secure readier access for remedies to the inflamed areas. None of these indications can be met entirely, hence the difficulty in attaining a cure. They remain, however, the conditions to be fulfilled, and while none can be thoroughly secured, they may be approximated in various degrees. To do this should be the object of treatment.

First, the irritating qualities of the urine may be diminished by the use of diluents as already recommended in the treatment of acute cystitis. Almost any of the negative mineral waters, so highly recommended by their owners, are useful for this purpose. Just as good is pure spring water, or even Schuylkill water, and better is distilled water. From one to two quarts should be

*Read before the Philadelphia County Medical Society, November 11th, 1891.

taken daily. If the kidneys are equal to their office, a large quantity of light-hued urine, of low specific gravity and relatively weak in solids, will be secreted.

When it is proposed to go further and add to the efficiency of diluents, mistakes are often made. While one can scarcely go astray in adding alkalies to the fluid ingested in acute cystitis, it is very different with the chronic form. In this the urine is often alkaline, or ready to become so on the slightest addition of alkali to the blood. Such alkalinity of urine in turn favors decomposition, the effect of which is to convert the pus, if present, into a tenacious, glairy fluid which the bladder cannot evacuate. Notwithstanding this tendency, I have known liquor potassæ and other alkalies to be administered under precisely these conditions —adding fuel to the flame. The indication under these circumstances is to render the urine acid, if possible, although this is very difficult to accomplish. Benzoic acid has the reputation of doing this, and it probably is true of it when administered in very large doses. It may be given in the shape of a five-grain compressed pill, of which at least six must be given in a day to produce any effect. The same property has been assigned to citric acid, but this is a mistake, as all of the vegetable acids, when ingested, are eliminated as alkalin carbonates.

The second indication is to medicate the inflamed surface. Two ways, of course, suggest themselves: (*a*) by the internal administration of drugs; (*b*) by the injection of medicated liquids into the bladder.

To carry out the first method, an enormous number of infusions, decoctions, and fluid extracts of vegetable substances have been suggested, the vast majority of which are absolutely useless, except as they serve by their quantity to act as diluents. Among the best known of these are buchu, pareira brava, uva ursi, and triticum repens. I have never known any beneficial results from any of them, and have long ago ceased to prescribe them.

The only class of remedies I have found of service in cystitis through their internal administration are the balsams. Of these, the balsam copaiba is practically unavailable, because not one stomach in a hundred will submit to its ingestion in sufficient doses or for long enough time to permit it to be of any use. On the other hand, I have found sandal-wood oil very useful, and it is about the only remedy of which I can say this for its direct effect upon the mucous membrane of the bladder. It is also comparatively well borne by the stomach, and is best administered in capsules containing ten minims. I believe it has heretofore been the usual custom to give these and like remedies after meals, but I have recently adopted the method of giving them on an empty stomach before meals. I believe they are as well, and even better, borne than when given after food, and they pass into the blood much more quickly. It is desirable to impregnate the blood and impart to the urine a balsam odor. This is scarcely possible with less than eight capsules a day—two before each meal and two at bedtime. I think I may say that I have found the so-called Santal-Medy capsules, which are, I believe, nothing but a very pure sandal-wood oil, better borne than the other specimens of the oil. I have given as many as twelve of these a day for considerable periods of time without deranging the stomach.

Both boric acid and benzoic acid are useful adjuvants to the treatment of chronic cystitis through their antiseptic effect on the urine, each in 5 grain doses rapidly increased to 10. I have used resorcin in 5 to 10 grain doses, and naphthalin in 2 grain doses for the same purpose.

The application of remedies to the bladder by injections can be conveniently considered in connection with the third indication—the getting rid of the products of inflammation, the pus and mucus, and the compounds resulting from their decomposition. The latter are, of course, not always present, but all who have had much experience with cystitis are familiar with the tenacious, glairy mucoid matter, which will not drop or rise up in a pipette, glistening with large crystals of triple phosphate, and exhaling a stinking ammoniacal odor which quickly contaminates an entire apartment. There is only one way to get rid of this, and that is to wash out the bladder, and too often this is too long deferred. Tepid water should be first used, and the injection made through the soft catheter now so invariably adopted. Sir Henry Thompson is very emphatic in his directions that no more than two ounces should be thrown in at a time, and that this should be allowed to run out, a like quantity again injected and allowed to run out, and this repeated until the water comes out as clear as it enters. In a very large experience in washing out bladders, I have never met an instance in which the amount named by Sir Henry may not be doubled with advantage, so that I begin with four ounces. When this quantity is used, a much shorter time is necessary to cleanse the bladder

thoroughly; and after the capacity of the bladder has been determined I often throw in more, because it is sometimes useful to distend the viscus a little, for in this manner the depressions and inequalities between the muscular trabeculæ, always present in advanced bladder inflammations, are thoroughly reached. These simple injections, practiced once a day, or in severe cases twice a day, often result most happily. I have seen the pus reduced from large bulk to a mere trace, and micturition reduced from five or six times to once a night. Commonly, after a few injections with plain water, I add some medication. My favorite is the salicylate of sodium in the proportion of a drachm to the pint. Its disinfecting qualities are undoubted, and I have some reason to believe that the soothing effect claimed for it is not without foundation. I have used a good deal of Sir Henry Thompson's soothing solution—of biborate of sodium an ounce, glycerin two ounces, water two ounces, and of this mixture half an ounce to four ounces of tepid water—with about the same result. Boric acid, in the proportion of a drachm to the pint, is also very satisfactory.

Alum is an astringent which has been too much overlooked of late in suppurating processes in mucous membranes, and may be substituted for the salicylate with advantage where the pus does not diminish as rapidly as is desired. It should be more cautiously used than the salicylate of sodium. Sufficient of the powdered alum should be first added to a pint to give it a distinctly astringent taste, when the bladder should be washed out as described, while a small quantity may be allowed to remain after the last injection.

Where there is a foul odor present I use the bichloride of mercury in solution, but exceedingly dilute. It is almost incredible how small a proportion of this salt is irritating to the bladder, and having learned by experience, I never begin with a solution stronger than 1 : 26,000, but gradually increase the strength if it is well borne. Carbolic acid may be substituted for the bichloride of mercury, but it has not been so satisfactory in my hands.

Other drugs are recommended to be similarly used, but I have had little or no experience with them. One from which much may, with reason, be expected is the peroxide of hydrogen, one part to five of water. In the single instance in which I have used this, the patient, who had been previously using the bichloride solution, returned of his own accord to the latter, because he thought it more satisfactory. Among other remedies recommended to be used the same way, are acetate of lead, one grain to four ounces; dilute nitric acid, one or two minims to the ounce; and nitrate of silver, one grain to four ounces; but I have had no experience with them.

Anodynes are indispensable in many cases of cystitis to relieve the patient of extreme pain and the frequent desire to pass water, which are the result of the same cause. Opium and its alkaloids are the most efficient, and they are best introduced by the rectum. There appears to be no absorbing power in the bladder for opium at least, and there is no use in attempting to use anodynes by that channel.

Cocaine, from which so much might reasonably be expected, has failed of its purpose in my hands. I have injected as much as two ounces of a 2 per cent. solution into the bladder without effect, except to produce some of the symptoms of cocaine poisoning. Most disappointing, too, has been the use of cocaine to remove the exquisite tenderness of the urethra which sometimes attends this condition, and is a serious drawback to the use of the catheter.

Where there is greatly enlarged prostate, catheterization is indispensable, and is attended often with the most happy results. It is often too long deferred because of the natural repugnance to the use of the instrument. Of course, the patient or his friends should be taught to use the catheter and to wash out the bladder. In these days of refined antisepticism it is scarcely necessary to say that the extremest precautions should be taken to cleanse the catheter after its use, in order to avoid sepsis. There is nothing better for this purpose than the bichloride solutions 1 : 1000, in which the catheter should be allowed to lie for a short time after being cleansed with boiling hot water.

How much can be accomplished by such treatment as the above-described? That an absolute and total cure is ever obtained in chronic cystitis is exceedingly doubtful. Hence the statement at the beginning of my paper, that the medical treatment of cystitis does not furnish a very satisfactory chapter in therapeutics. On the other hand, that a life of suffering may be converted into one of comparative comfort is certainly true, and I have many times seen it. Nay, more, I have more than once seen a life prolonged half a dozen years in such comfort by careful attention to the bladder, of the kind described.

It occasionally happens, of course, that all treatment of this kind fails, and yet the patient lives to be tortured by the discomfort of the situation. Three times I have had perineal section done by the surgeons for the relief of such cases, in each case with some relief, although with less than was hoped for.—For discussion, see Society Reports.

THE URETHRA, BLADDER, AND URETERS DURING PREGNANCY, LABOR, AND THE PUERPERIUM.*

BY W. H. PARISH, M. D.,

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The condition of increased vascularity and irritability of the urethra, bladder, and ureters during pregnancy is due in part to the pressure of the uterus, and in part to the alterations in the general pelvic circulatory and nervous conditions awakened by the stimulus incident to gestation.

The bladder in early pregnancy is less capable of distention in the antero-posterior direction, and its enlargement is chiefly lateral. Later in pregnancy the enlarging uterus draws the bladder upward above the pelvic brim. The changes in the position of the bladder during pregnancy doubtless determine to some extent, more frequent, and at times annoying micturition, yet the elevation of the bladder above the brim is a conservative provision, for in this way the bladder is largely protected from harmful pressure during normal labor.

However, the utero-vesical ligaments are so unyielding that the bladder participates in such abnormal displacements of the uterus as occur during the pregnant state; as, for instance, it follows the uterus in procidentia, and is drawn downward and backward in retroversion of the gravid womb. The urethra becomes elongated with the elevation of the uterus, and in early pregnancy if uterine prolapse occurs, and also in advanced pregnancy if the uterus drops into the true pelvis, the upper portion of the urethra curves backward and downward, constituting dislocation of the upper third of the urethra, with the symptoms pertaining thereto.

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With the changes in the position of the bladder, the lower portions of the ureters necessarily change in position, but these tubes suffer chiefly from pressure of the pregnant uterus, and, as a consequence, they, above the point of pressure, often become dilated to the size of the finger or of the thumb. The blocking up of the urine in the ureters influences the renal condition unfavorably, and doubtless, at times, contributes in the production of urinæmia and eclampsia. The pressure exerted upon the ureters, suggests the advisability of repeated recumbency, or, better still, of the knee-chest position, during advanced pregnancy. When peri-uterine adhesions, with uterine displacement, exist, there is still greater risk of injurious compression of the ureters, and of eclampsia.

Mild cystic catarrh, some say inflammation, is of somewhat frequent occurrence during pregnancy, and may be the cause of albuminuria when the amount of albumin in the urine is small.

Hæmaturia occasionally occurs, because of the impeded pelvic circulation. A varicose condition of the bladder and urethral veins, usually with a like condition of the anterior vaginal wall and of the vulva may arise, and be the cause of hæmaturia, with frequent urination and pelvic distress. This morbid vascular condition calls for rest during pregnancy. After labor it usually disappears, but when subinvolution occurs, it may become persistent.

When cystitis, even of mild type, exists during pregnancy, its careful treatment is strongly indicated, for labor and the lying-in are very prone to aggravate the inflammation. Especially is this true if the cystitis is of gonorrhœal origin. It has been observed also, that when cystitis exists during pregnancy, subinvolution of the uterus is very apt to occur, and the inflammation is very liable to become chronic.

In retroversion and incarceration of the gravid uterus, the lesions produced in the urinary apparatus constitute the most serious morbid changes incident to this grave complication of early pregnancy. Ischuria is the earliest, and one of the most important symptoms. The early compression of the urethra by the uterine cervix produces œdematous swelling of the urethral wall, with at first partial obstruction to the exit of urine. The pressure instituted by the enlarging uterus increases until urinary retention occurs, accompanied, it may be, with dribbling of urine from the over-distended bladder. The retained urine rapidly under-

goes ammoniacal decomposition, and cystitis becomes an early complication. The inflammatory action produces diphtheritic flakes over the mucous membrane of the bladder, with erosion and ulceration. Absorption of the decomposed urine occurs with constitutional symptoms.

The mucosa may be cast off from the entire bladder, but especially from the portions of the organ above the neck, showing that the separation of the mucous membrane is due to the degree of congestion and of inflammation, rather than to direct pressure—for the pressure is greatest at the neck. I have seen large portions of the mucosa cast off and blocking the urethra. It is stated that the separation of the mucous membrane is not likely to occur before the sixth day of the incarceration.

In some instances portions of the musculosa have been thus separated, and gangrene of the entire thickness of the bladder-wall has occurred. Owing to the retention, the ureters become greatly and the renal pelvis moderately dilated. The inflammation extends along the ureters and invades the kidneys. The suppression of retention also occurs with constitutional manifestation.

In the over-distention the bladder wall, though thinned at points, becomes remarkably thickened throughout most of its extent, and in a few days, even when entirely empty, will present to the palpating hand a firm mass, wonderfully like the non-pregnant uterus, and may mislead the examiner into supposing that the uterus is empty, and that a retro-uterine tumor exists.

In some instances the distended bladder has reached even to the ensiform cartilage. Rupture of the bladder has occurred, especially in the attempt at replacement. As an essential preliminary to replacement, the bladder must be emptied either with the catheter or by aspiration. When the over-distended bladder is being emptied, a bandage should be drawn firmly around the abdomen to lessen shock, to prevent the entrance of germs with atmospheric air, and to prevent hæmorrhage from the cystic vessels.

Paralysis of the bladder accompanies the over-distention, and catheterization will be necessitated at intervals of six hours after replacement, otherwise distention will again occur, with danger of a reproduction of the uterine displacement. Irrigation of the bladder will be indicated for several days, for the cystitis and ascending ureteritis endanger life after the uterine displacement has been corrected.

In the original production of retroversion of the gravid uterus, an over distended bladder probably has very little influence, except in instances in which retroversion preceded pregnancy, and in other instances in which superior adhesions prevented the distending bladder enlarging upward.

When we study the relations of the bladder to labor, we find that in an entirely normal delivery, the bladder does not usually impede labor, and labor does not interfere with the integrity, or injuriously with the functions of the bladder. For, in addition to the elevated position of the bladder at the end of pregnancy, the frequent micturition of labor is conservative, for thus the bladder is kept so nearly empty that its presence is in no manner harmful.

Should, however, œdematous swelling of the urethra, or the immediate effects of pressure, or perverted nerve-action lead to distension of the bladder, parturient expulsive efforts are rendered feeble and less efficient, and the presentation or position may be modified unfavorably.

In neglected cases, an over-distended bladder becomes a grave complication, partly in the same manner that it does in incarceration of the pregnant uterus. A distended bladder may contribute also to the formation of a fistula, or to rupture during expulsive or extractive efforts. In rupture, the tear usually occurs in the posterior wall and into the peritoneal cavity, though it may occur anteriorly, and, in the latter case, if low down may give rise to infiltration of the anterior abdominal wall. Collapse accompanies rupture of the bladder, and if urine escapes into the peritoneal cavity, a fatal result is very probable. Under such circumstances cœliotomy would be urgently demanded, with trimming and suturing of the lips of the rent, and careful toilet of the peritoneum.

Rupture of an over-distended bladder has occurred during expulsive efforts in an abortion at the third month of gestation, even when there was no incarceration of the uterus.

Cases of cystocolpocele, or prolapse of the bladder, usually with distension, have occurred during labor, impending delivery and leading to the enormous diagnosis of the bag of waters, or of a fluid pelvic tumor. Under such erroneous diagnosis the bladder has been incised or punctured *per vaginam*. A knowledge of the possibility of such a complication should lead to an easy diagnosis with the catheter carried into the bladder.

The downward dislocation of the upper portion of the urethra which sometimes occurs as the uterus enters the pelvis near the end of pregnancy may be further aggravated as the head descends, or when, with the forceps, a large head is pulled through the pelvic canal before moulding has occurred. This condition of the urethra is often associated with partial prolapse of the bladder, but both conditions usually disappear after labor if proper involution occurs, but may be persistent in subinvolution, and especially when ununited laceration of the perineum exists.

Undue distension of the bladder rarely occurs during labor, except in the second stage, and is then usually dependent upon pressure of the presenting part upon the urethra and the neck of the bladder. When an anæsthetic is administered during either the first or the second stage of labor, retention may arise, and be due to the obtunding influence of the anæsthetic. It should also be remembered that the secretion of urine is increased during labor, and the bladder may become filled rapidly. Sometimes, when spontaneous urination seems impossible in the recumbent posture, an attempt to urinate while sitting and between the pains will relieve the retention and obviate the necessity of catheterization, unless the head is fixed in the pelvis. When catheterization is necessitated during labor the simple precaution of pushing up through the vagina, in the abscence of pain, the presenting part is too often overlooked, with the result of always endangering the integrity of the urethral and bladder mucous membranes, and sometimes of failing to introduce the catheter.

In neglected cases it is occasionally necessary to resort to supra-pubic aspiration of the bladder during labor, but before this is done one should call to his aid the relaxing influence of anæsthesia, and the favoring latero-abdominal and genu-pectoral positions.

Prolonged pressure, especially of the fœtal head, or occasionally of any part of the fœtus, endangers the integrity of the cystic, urethral, and uterine walls.

Ninety per cent. of urinary fistulæ are dependent upon injuries sustained during labor, and in most instances are produced by the prolonged pressure of some part of the fœtus. An evidence of the truth of the latter statement is the generally recognized fact that since the more prompt resort to the obstetric forceps has become the rule of practice, urinary fistulæ occur with greatly reduced frequency. The old practice of administering ergot during labor contributed, doubtless, in the production of fistulæ, through its influence in bringing about continuous uterine contractions.

It is long sustained pressure that determines the sloughing from which the fistula generally arises. Although the general use of the forceps has promoted in many instances the formation of fistulæ, yet I am confident that the injudicious use of the instrument has been at time productive of such lesions.

The resort to the forceps when the head is movable above the brim, especially with a flat pelvis considerably narrowed, places in great danger the walls of the urethra, bladder, and ureters. Also the too frequent mal-direction of the force exerted in traction with the forceps, as when this force is directed against the anterior pelvic wall, produces contusions and sloughing of the soft parts, including, at times, the walls of some part of the urinary apparatus. The contusion may be sufficient to produce a fistula, or it may less seriously yet injuriously affect the urinary structures.

Were the axis-traction forceps in universal use, as in my opinion they should be, the mal-directed and too great force so often resorted to in traction would be avoided, and consequently the pressure exerted would be less prolonged and less forcible. At times a fistula may result from excessive pressure exerted even for a short time, especially if the bladder is partially or greatly distended.

Prolonged or undue pressure during labor may also give rise to erosion or ulceration and inflammation of either urethra, bladder, or ureter.

These structures are liable to serious injury during the performance of craniotomy, from being punctured with either spiculæ of bone or with the perforator.

The performance of version and of extraction by the feet has resulted in rupture of a distended bladder, and in other instances in sloughing productive of fistulæ, or of vaginal cicatrices which interfere with the functions of the bladder.

Vesico-intestinal fistulæ have sometimes followed labor in cases of old adhesions between the bladder and some part of the intestinal tract.

In the performance of the classical Cæsarean or of the Porro operation the bladder and ureters should always escape injury, unless there exists a patulous condition of the urachus.

In a large proportion of the cases of the cœlio-elytrotomy the bladder was opened into, and the danger of this accident occurring was one of the several good reasons why that operation quickly fell into disfavor. Occasionally a calculus exists in the bladder during labor, and its presence as that time always brings considerable danger to the patient. It is advised by some to endeavor to push the calculus upward above the brim, but it seems to me that this procedure would often be impossible of performance, and would be always of uncertain benefit. Extraction through the urethra after dilatation, preceded, it may be, by lithotrity, would promise the best result. Or, if this were impracticable from the low and fixed position of the head, vaginal, or, possibly, supra-pubic lithotomy, would be indicated. If the stone could not be carried above the brim the supra-pubic operation would not be possible. I can scarcely understand how the circumstances can be such as to justify the performance of craniotomy, the child being alive and viable.

During the puerperal period perforation of the ureter, bladder, or urethra may arise from ulceration or from sloughing due to injuries sustained during labor. In fact, most fistulæ do not appear until several days have elapsed. In some instances by judicious treatment, especially with vaginal, antiseptic douches, such perforations may be avoided. This is effected by lessening the intensity of the ulcerative and inflammatory processes. The liability to cystocele may be lessened by proper observance of recumbency and by immediate perineorraphy, if indicated. The measures influential in securing due uterine involution may be said to be generally favorable to the establishment of a normal condition of the urinary apparatus.

The inability to empty the bladder, so frequently existing during the few days following labor, may be due to one or several causes. At times swelling of the urethral wall may be the principal cause, though I do not think that this it frequently the sole cause. Often the loss of support sustained by the bladder due to the emptying of the uterus occasions the retention, while in other instances recumbency is chiefly at fault, for not a few women are unable to urinate at any time while recumbent.

It is best that the bladder should be evacuated every eight hours after labor.

If the labor has been a normal one, it is safer for the patient to be placed on the commode without being on her feet than to use the catheter. Nearly always the sitting posture will enable her to urinate. The use of the catheter after labor brings peculiar risks. Septic urethritis, cystitis, ureteritis, and nephritis, one or all, have certainly been thus produced, and not infrequently. The catheter often causes abrasion, and although absorption through the urinary mucous membrane in its normal condition must be exceedingly slow, yet when this membrane is congested, but especially when abraded, absorption readily occurs. Practically the physician is never certain that the catheter is aseptic unless he cleanses it himself, and even then he must have correct knowledge as to how the instrument can be cleansed. Many nurses are either careless or ignorant, and the catheter is not easily kept aseptic. Moreover, the catheter may be perfectly clean, and yet it may pick up from the external genitals after labor, septic material, or material that will quickly become septic, and carry it into the bladder. The custom, still recommended in some text-books, of passing the catheter under the bed-covering, is exceedingly erroneous. If the catheter must be used, the genitals and urethral meatus should be exposed and rendered entirely clean, and the clean catheter should be introduced with the parts in view—for only in this way can one guard against the introduction into the bladder of foul material. Hence, unless the contra-indications are plain, the patient should be placed on the commode, or in the sitting posture on a vessel in bed, or in the knee-elbow position if she cannot urinate in a urinal or a bed-pan. After primary perineorraphy the patient should be permitted to urinate spontaneously while lying on the bed-pan, and immediate douching of the external parts will prevent decomposing urine from interfering with primary union.

A catheter should be perfectly smooth, and with small orifices near the distal extremity. Some writers prefer the gum catheter. The best is of glass, and each patient should have a new one. The glass catheter can be more easily and more certainly rendered aseptic than the gum. Cystitis after labor determines subinvolution—may lead to urethritis, and possibly to pyelitis, which may rapidly terminate fatally, or become chronic, with eventual loss of life. An active inflammation of the bladder, especially after labor, may be productive of pericystitis or pelvic peritonitis and of pelvic cellulitis. Chronic cystitis in the female often dates back to the lying-in. Stricture in the course of the urethra, or at the meatus, also finds its origin in a post-partum urethritis,

or in external ulceration.—For discussion, see Society Reports.

THE RATIONALE AND TECHNIQUE OF SUPRA-PUBIC CYSTOTOMY.*

BY JOSEPH HOFFMAN, M. D.,

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The history of this now classical operation for all the affections of the bladder where surgical interference is justifiable is a travesty upon the acumen of the surgeon. I speak widely, and it may seem to some, unwisely, but it appears to me such expression is only moderate when all facts in reference to the subject are considered. The lateral operation for stone, as is well known, became popular because of its success upon children. Hence the reasoning by which it was indiscriminately applied to all cases in the adult seems only ridiculous when the same methods of arguing the so-called high operation out of sight are scanned. The high operation was dangerous because of wounding the peritoneum, and this was gravely held to, after it was well known that the operation had been performed at an early day with success and that the anatomy of the parts is such that the peritoneum is easily escaped. Up to within a decade the same logic is followed, and the supra-pubic operation is gravely dismissed with the feeble criticism that the statistics of the operation are not good, though such condemnation is followed generally with the explanation that this is perhaps due to the fact that the operation has been reserved for cases in which other operations could not be done, and accordingly the patients were in an unfavorable condition. It is not the intention of this paper to go into the history of the operation, only as to show that the reasoning against it both present and past, is in the highest degree unworthy of acceptance and in fact does not amount to reasoning at all. It is intended rather to call attention to the fact that in the opinion of the advanced surgical exponents of to-day it is the operation, beside which all others, in the treatment of vesical disease, must play an unimportant part. Here in Philadelphia we have had much urgent opposition to the acceptance of this fact, but also, it is pleasant to know, that here also there has been much and well-argued stand taken for the operation. In this connection Dr. Dulles must have unstinted credit.

It is too much the fashion in surgery, as in physic, to follow out an ancient idea as if it were inspired. The mummies of science are no more worthy of adoration than error in any other form. So-called scientific data which are not and never were scientific, are at the bottom of much mischief and many disasters in practical surgery as well as in physic. The arguments by which the supra-pubic cystotomy can be urged for general acceptance in all cases in which it is proposed to enter the bladder, are all based upon anatomical fact and practical results in good hands. Those who are having the most experience with it are giving it the highest praise. Looking at the now generally accepted axioms of this latter-day surgery it is difficult to understand how this can be otherwise. In the perineal point of attack by which the bladder is to be entered there are many structures of vital importance and whose anatomical distribution are far from uniform. On the other hand, in the supra-pubic operation, there are no important structures to be met; there are no blood-vessels that cannot be easily controlled in the sight of the operator; there are no anomalies to be expected, and if they do occur, need have no terror for the operator. The operation then being always under the complete control of the operator, is clearly the one to be preferred from a merely theoretical standpoint. But theory does not always hold good in practice, so let us see whether here we are also misled. The danger most to be dreaded from the perineal operations are hæmorrhage and contusion of the parts by the passage of a large stone, especially injury to the seminal vesicles. In the procedure under consideration we have seen there is no danger from hæmorrhage, and the contusion cannot interfere with vital structures because they are not met; the bladder is not wounded where its integrity is interfered with, and even if a stone larger than is suspected is to be dealt with, there is no difficultty in removing it far more successfully and certainly and simply than by any other method. I do not except the now generally accepted method of crushing. The reasoning by which this conclusion is reached I think so clear that I will not follow it out. How many of the older operators in this Society, in this room, have in mind harrowing attempts to get control of calculi imbedded in the bladder, of hands introduced into the rectum, in order to bring the stone into the grasp of the forceps, of lacerated

*Read before the Philadelphia County Medical Society, November 11th, 1891.

bladder, perineum, urethra, and all of which it is hope of the operator to escape! It will be evident to the veriest tyro in anatomy that all this not only can be escaped, but is escaped, in the supra-pubic operation.

The next *bete noir* of the perineal operation is urinary infiltration. It cannot be questioned that in this latter operation the larger the stone the greater the danger of contusion and, therefore, the greater the danger of urinary infiltration. Now, in supra-pubic cystotomy, the danger of infiltration is practically nil, for the reason that there is no deep dissection of parts, that the urine passes gently upward and outward, and cannot lie collecting and dissecting by gravity into the adjacent structures. The danger of infiltration in the supra-pubic incision can only be said to obtain when an attempt is made to close the incision, and hence it has become an axiom in the operation that the incision is better left open. There is found to be but little danger of fistulæ—in fact, the great difficulty is to keep the bladder open as long as necessary. Accordingly we see that the three paramount dangers of the perineal operation are absent in the abdominal operation, and that theory and anatomical facts combine to demonstrate the legitimacy of the newly adopted operation. Now let us further consider some of the points in which it is asserted that the lateral operation for stone is superior. In children, for instance, where there is less danger of extensive laceration, it is claimed such is the case. Let us see. A year ago I said to Dr. Deaver: "I am going to do a supra-pubic cystotomy for stone." The question was: "What is your case?" The answer was: "A boy, three years old." Again the answer: "You have a favorable case," and the opinion was justified by the result. It must be remembered that in children the bladder is rather an abdominal than a pelvic organ, and that lying higher it is more readily reached. In the case just referred to the recovery was absolutely uneventful. After the first day the child lay comfortably in bed, playing, with neither fever nor pain. In great contrast with this case comes the report in a volume of the *Transactions of the Southern Surgical Society* in which a vaginal cystotomy was done upon a child six years old. Imagine the consequences at their best—the laceration, the pain necessarily supervening; but take into consideration subsequent operation for vesico-vaginal fistula, and the too late concession of the operator, that had the size of the stone been suspected, the supra-pubic operation would have been selected. Herein lies the folly of choosing any operation instead of another which will answer all conditions, because in tradition no alternative has been preserved. I take it to be a surgical postulate that in every instance that operation should be selected which promises the greatest relief with the least danger or discomfort to the patient. It is not a question of what operation we are used to performing. It is which operation best covers the ground. The argument has, up to this point, been directed to cystotomy from the standpoint of operation for caculus. It is not limited to this, however. In the male we have prostatic disease, than which there is no greater bane to old age. Hitherto the only relief was by constant catheterization. Now it is a recognized procedure to drain the bladder permanently from above. No one needs further argument than the cases reported by McGuire, of Richmond, and of the Davises, of Alabama, to be convinced that this operation to old men is the greatest possible boon. Not only is the bladder drained, but the prostatic enlargement is itself removed with the greatest success, and in many cases the disease permanently cured. Belfield, of Chicago, a year ago gave an exhaustive tablature of this operation, and its success places it among the most important additions of the day. It now becomes evident that since drainage is a most important element in the treatment of chronic cystitis in women, a most desired step is attained, by which the woman with comfort and cleanliness is able to go about while she is being cured, with no discomfort, and cleanly. McGuire gives as his opinion that there is no difficulty of so managing the supra-pubic opening so that the urine can be retained for six hours. This being the fact, there is no longer reason for drainage *per vaginam*. By this it will be seen that in all cases in which it is intended to open the bladder the supra-pubic operation gives most assurance of all-round success, whether in adults or children, whether the disease be simple inflammation or chronic prostatic enlargement. This is my experience, both in operations upon the child and adult. It is evident also that in lieu of an encysted calculus the operation is absolutely sure of success.

The details of the operation are exceedingly simple. Much has been written that tends to produce an impression that the steps are more or less complicated. No special instruments are needed. A bistoury and a few artery clips are all that is required

—additional instruments only being called for according as to the conditions met after exploration. The injection and washing out of the bladder are, I believe, all that the surgical aspect of the operation requires.

The bladder can be easily reached both in the child and adult without packing the rectum. The relative size of the bladder in the adult and child is to be regarded, care being taken not to over-distend the viscus. The incision is made close down to the pubis, and two pairs of artery forceps used as retractors, as the incision is deepened, obviates all necessity for special instrument or additional procedure. The supra-pelvic fat is pushed asunder with the finger, and the bladder comes into view or is easily felt at the bottom of the wound. The viscus is easily raised into the wound by the forceps applied again after the manner of using them to raise the peritoneum, and the incision is readily made. The forceps can still be retained in position or, if deemed expedient, a thread can be introduced by which control over the edges of the wound is maintained. The subsequent procedure is now dependent on the operation to be done. If drainage only is intended, a rubber tube is stitched into the wound or a hard drainage-tube retained by simple means.

If a calculus is to be removed, the procedure is as simple as taking a cherry from its seed. The operations for tumor and prostatic disease are, of course, more extensive and dangerous, and these it is not the purpose of the paper to consider, but only to call attention to the fact that their removal by this operation becomes more a matter of surgery and less of experiment than by any other means whatsoever.

Finally, for the operation all can be claimed that simplicity, accuracy, and safety can commend. The so-called statistics of the operation before it was fairly tried, or used for other than forlorn cases, cannot be used either to condemn or recommend it. Its results, as obtained at the present time by exact surgeons, working thoroughly and entirely from an anatomical standpoint, give it a record unequalled by any other method of dealing with the surgical disease of the bladder.—(For discussion, see Society Reports.)

LUMBAGO.

Dr. Lyman Watkins says (*Med. Gleaner*) that ten drops of the tincture of gelsemium every four hours will almost invariably relieve that painful condition, or backache commonly called lumbago.

NOTES ON FOUR CASES IN GYNÆCOLOGY.

BY JOHN D. MAURY, M. D.,
PHILADELPHIA.

The author is indebted to Doctor Price, for the material upon which to operate, and all requisites for the operations.

REMOVAL OF THE RIGHT OVARY AND TUBE.

Case I.—Patient unable to work because of pain in right ovarian region, increased by motion, defæcation, &c. The operation was performed without difficulty. The right ovary, being raised to view, and found enlarged and cystic, was, with its tube, ligatured off with the figure 8 ligature and removed.

The left tube and ovary, being healthy, were returned. Incision closed with silkworm gut. Recovery.

REMOVAL OF BOTH OVARIES.

Case II.—Colored. History of vaginitis at previous date elicited. Suffered constant and severe pain in both ovarian regions. By vaginal examination a mass could be felt on each side of the uterus, tender on palpation, the right being more easily made out.

At the operation both tubes were found distended with a clear fluid, the right containing about two ounces and the left a little less.

There were a few adhesions, easily broken up. Both ovaries were enlarged.

Discharged, cured, in three weeks from date of operation.

REMOVAL OF BOTH OVARIES.

Case III.—Had suffered pain on left side for several months. Pelvic examination showed a mass posterior and to the left. On opening the abdomen, on the left was found an ovarian cyst the size of a hen's egg and on the right a smaller one. Both were removed. Patient discharged in three weeks.

OPERATION FOR VENTRAL HERNIA.

Case IV.—Patient suffering from ventral hernia as a sequel to ovariotomy done six years previously to stop hæmorrhage from fibroids. The rupture appeared about a year after operation, and continued slowly to enlarge until corresponding in size to an orange. At the lower right border of the hernia was a sinus, which would open periodically and discharge pus, close spontaneously, to reopen at a later date.

An incision two inches long was made to the left of the hernia through the anterior

layer of the sheath of the left rectus muscle, the muscle pulled aside, and the incision deepened until the peritoneal cavity was opened.

After exploration the incision was enlarged, up and down, until its length corresponded with the parallel diameter of the hernia.

The contents of the sac, omentum tightly adherent, were reduced, and the portion of the omentum which had been adherent ligated and cut away to diminish the amount of raw surface in the peritoneal cavity. Attention was then turned to the sinus. The right corner of the uterus was found anchored to the abdominal wall by a mass of cicatricial tissue two inches in diameter through which the sinus ran. The sac of the hernia with fascia and skin covering it, was cut away; and with it that portion of the sinus which ran through the abdominal wall. The dissection was carried on into the cicatricial mass, part of it being removed with the rest of the sinus. The silk ligature placed around the pedicle six years before, was found at the bottom of the sinus surrounded by pus having apparently undergone no change. Next the right lip of the wound was split, exposing freely the inner border of the right rectus muscle, from the upper to the lower end of the wound. Silk worm gut stitches were introduced and the wound closed as after ordinary abdominal section. She was up and around in three weeks.

The frequency of ventral hernia as a sequel to abdominal operations is, for obvious reasons, hard to estimate. Dr. John Homaus has, with much care and labor, published a table of the after-history of his cases, a study of which is exceedingly interesting. In looking this table over we find several things of interest. Out of 242 recoveries of ovariotomy, thirty-four, or a fraction over fourteen per cent. were followed by rupture. In no case in which rupture occurred, was drainage used. In the 34 cases followed by rupture, fourteen had long incisions (5 inches or over), and in the remaining 20, the incision was less than 5 inches. Thirteen of the 242 cases are known to have borne children subsequent to the operation, 4 of them having had more than one child, and in only one was there rupture, she having gone to term twice.

The deductions from this table do not seem to agree very well with the causes for rupture usually given.

There are numerous methods of operation for the care of this condition. Wylie unites the fascia with a separate suture. Tait splits the edges of the wound deeply all around making two flaps. He then brings the inner flaps in apposition, raw surface to raw surface, and the outer flaps the same way, the result being an internal and an external projection. Chadwick passed sutures, by means of a Peaslus needle, an inch back from the margin of the wound. Marion Sims, after cutting away the sac, united the peritoneum by Lembert's stitch, and the rest of the wall by a separate stitch. Richardson cut away the peritoneal sac, and closed the wound by deep sutures, passed through the peritoneum. The advantages of the method used in the above case, which is the method practiced by Price, is the union of broad muscular surfaces. The two muscles are made as one and there is no crack or weak place, into which the "wedging or separating transverse force," spoken of by Wylie, can insinuate itself.

Society Reports.

PHILADELPHIA COUNTY MEDICAL SOCIETY.

Stated Meeting, November 11, 1891.

Dr. James Tyson read a paper on The Medical Treatment of Cystitis. (See p. 963.)

DISCUSSION.

Dr. H. A. Slocum:—I am sorry that Dr. Tyson did not say something about diet—about such articles as tomatoes and asparagus, particularly the latter.

In the local treatment of cystitis I have obtained good results from the use of boracic acid, two drachms to a pint of water used warm. This is introduced with a catheter with a little funnel. I have recently seen described a method of washing out the bladder by means of a catheter introduced into the urethra. To this is attached a tube, and the fluid is allowed to enter by hydrostatic pressure.

I have also used boracic acid internally. This in ten grain doses every two hours has been of more service than anything else that I have tried.

Dr. T. S. K. Morton:—In the treatment of chronic cystitis I have found most satisfaction from the use of salol in conjunction with milk diet. I have the greatest confidence in the administration of salol in doses of from three to five grains repeated several times daily. The theory is, that in the kid-

neys salol liberates carbolic acid. While many cases have been benefited by the use of the drug, in other instances it has, like everything else, failed.

I feel convinced, also, that I have had good results from the internal administration of cocaine, owing to its diuretic action. I think that it has some local effect upon the bladder.

A third drug from which I have had good results is sandal-wood oil, and the preparation mentioned by Dr. Tyson (Midy) is the best; but it is objectionable on account of the fact that it is largely advertised, and the name of the manufacturer is stamped on the capsules, thus giving to a certain class of patients a clue to their treatment which is an advantage neither to them nor us.

Dr. George E. Shoemaker:—I wish to add a word in regard to the internal administration of boracic acid. I have in the past four years used it in a number of cases with a great deal of satisfaction, giving it in doses of from five to eight grains every two hours in plain water or cinnamon water. I have used it with benefit in one case of perineal fistula of long standing in the male. Of course, all medical treatment is subsidiary, but this is the drug which has given me most satisfaction.

Dr. Charles P. Noble:—I have heard no mention of benzoate of ammonia or benzoic acid. I have found these drugs of great advantage in foul alkaline urine. Under some circumstances I have had good results from boracic acid. Rest, a restricted diet, and leaving off meats, have had a good influence. Locally I have used a saturated solution of boracic acid, and rarely have had to reduce the strength of this. I wash out the bladder every second or third day. I have seen good results from triticum repens, particularly in cases where *ardor urinæ* was very marked. Better results can be had by combining it with tinctures of aconite and belladonna, and with bromide of sodium. In summer-time a pleasant remedy is watermelon used freely. This, as is well known, is a powerful diuretic. It gives a bland, unirritating urine, and in a measure avoids the necessity for irrigation.

My experience in the treatment of cystitis has been largely with women. A growing experience makes me the more convinced that cystitis has some local cause, as a rule, which must be sought for and removed. In women a torn perineum, resulting in cystocele, and tubo-ovarian inflammation are the most common causes of cystitis. When these conditions receive appropriate treatment the cystitis disappears.

Dr. Joseph Hoffman:—There is a combination of three drugs which I have used with benefit—these are benzoate of ammonium, salicylate of sodium, and bromide of potassium. The last is a local sedative. I think that benzoate of ammonia is perhaps the most efficient of all remedies in chronic, and even in acute, cystitis. The salicylate of sodium is also of value. The mechanical treatment should not be forgotten. It is absolutely impossible to cure acute cystitis with the patient going about. Rest is an important factor in the treatment. It is only by rest in bed that we can secure absence of abdominal tension, which is important.

Dr. Donnally:—In one or two instances in which I have used iodoform in the proportion of two grains to the ounce in four drachms of mucilage, it acted very efficiently and prevented ammoniacal decomposition.

Dr. Longaker:—I have found benzoate of ammonium most effective, but prefer to give it with belladonna rather than with bromide of potassium. Ten grains of the salt, four times a day, is sufficient.

Dr. Mary E. Allen:—In one case where I tried a number of remedies without effect, benefit followed the use of fluid extract of buchu, which was used in conjunction with Buffalo lithia water and a diet consisting principally of milk and vegetables.

Dr. Tyson:—I have had no experience with asparagus as a therapeutic measure in cystitis. Boric acid and benzoic acid I quite forgot to mention in the paper, which was prepared hurriedly. I have used them both freely. Benzoic acid has the disadvantage of affecting the stomach unpleasantly. I have not used benzoate of ammonium, but shall take the first opportunity to give it a trial. I cannot say that I have seen any curative results from boric acid or benzoic acid. They affect the urine favorably. I have also used salol, but have found it very uncertain. In one case where the disagreeable odor of the urine was complained of, I gave salol in large doses without any effect.

Dr. W. H. Parish then read a paper on The Urethra, Bladder, and Ureters During Pregnancy, Labor, and the Puerperium. (See page 966.)

DISCUSSION.

Dr. M. Price:—I agree with Dr. Parish that the traction-rod forceps should be the only ones used. I disagree with the statement that bladder injuries in labor are more

infrequent than formerly. I believe that they are more frequent. The reason that we see fewer of these cases is that in every town there is now a man who is able to close these fistulæ. In the last few years I have seen many injuries of the bladder that have not been recognized.

I agree with Dr. Parish that an intelligent attendant should prevent most, if not all, of these accidents by his knowledge and care of the parts involved, and his investigation of the condition of the bladder during labor.

Dr. Charles P. Noble:—I wish to say a few words in regard to the use of violence in forceps delivery when the head is high in the pelvis. I am satisfied that it is not uncommon for men to deliver with all the power they have. This undue use of force is certainly injurious to the bladder as well as to the other pelvic organs. If the forceps are put on before the cervix is well dilated, it is very apt to happen that the anterior lip of the cervix and the bladder are drawn down in front of the head and are in great danger of contusion. So far as primary injury of the bladder is concerned, I am satisfied that not a few cases are due to great force used in delivery. I quite agree that the amount of force required can be lessened by the use of traction forceps. I think that too much cannot be said about the inadvisability of trying to deliver a large head through a small pelvis by the use of great force. This subject has been agitated recently by the introduction of a new forceps by Dr. McGillicuddy, called the "anti-craniotomy forceps," to be applied to heads too large to come through a given pelvis. The idea of drawing children through pelves relatively too small cannot be condemned too strongly. The natural result is serious or fatal injury to the mother and a dead or "spoiled" baby.

I was brought up with the idea that after delivery a woman should not be permitted to move, but under the teachings of Dr. Goodell and others I have allowed women more latitude, and have seen no reason to regret it. Very often if a woman turns over on her elbows and knees she can lean back and pass water in a chamber placed between her feet, without getting out of bed. Of course this should not be permitted in feeble women, or where there is danger of hæmorrhage. In this way the use of the catheter can be avoided, and likewise a possible catheter-cystitis. The position likewise favors drainage of the lochia, and hence is an efficient and natural antiseptic precaution. Women who are allowed some liberty in the bed are much more comfortable than under the old method of treatment.

Dr. Joseph Hoffman:—I am glad to hear a man of Dr. Parish's experience urge the use of the traction forceps to save the bladder. I use it always, and have never seen any injury to the bladder. It has been said that with the traction forceps less force is used. In reality more force is used, but it is applied in the line through which the head escapes, and no force is wasted on the soft tissues as is the case with the ordinary instrument.

Dr. Daniel Longaker:—I consider the use of the catheter after labor as very undesirable, and my experience is that its use can almost always be avoided by allowing the patient a little liberty. I have had a series of fifty cases in which I did not once use the catheter. Then there occurred a case of permature labor in which the dilating stage was protracted and the second stage prolonged. The patient was unable to pass water without the use of the catheter.

The statement that injuries of the bladder are as frequent or more frequent than formerly is, I think, incorrect. I think that it is a fact that the Women's Hospital in New York owed its birth to the number of cases of vesico-vaginal fistula, and the treatment of these cases formed a large part of the work of the institution. Now the cases of that trouble treated there are very few indeed.

Dr. Parish:—Dr. Price has unintentionally quoted me somewhat incorrectly. I did not say that injuries of the bladder were less frequent, but that vesico-vaginal fistulæ were less frequent. I do not believe that the injuries in the aggregate are less common. Prolapse is probably more common than before the general use of the forceps.

In preparing this paper I was compelled to refer to some points but briefly. In regard to sitting up or turning over on the kness after confinement, one must be careful that he does not permit a patient to sit up who should not. We must consider the individual case; otherwise great harm would result.

Dr. Joseph Hoffman then read a paper on The Rationale and Technique of Supra-pubic Cystotomy. (See page 970).

DISCUSSION.

Dr. John B. Deaver:—Simplicity should not, under all circumstances, be the best recommendation of an operation. I grant that many do supra-pubic cystotomy because it is

simple. The left lateral operation is also simple. I have never had a death from the operation; I have never seen the dangers to which Dr. Hoffman refers. Uncontrollable hæmorrhage and extravasation should not occur. The greatest danger was not mentioned by him—that is, wounding of the spermatic duct.

There is no one operation for stone in the bladder, but each case must be judged on its merits. The ideal operation for stone in the bladder is litholapaxy, after which the patient can usually be up in five days. It, however, requires experience and manual dexterity. To do it successfully requires that one should have done it several times. Anyone can do the supra-pubic operation. It is, however, not simplicity alone, but the merits of an operation that should determine its value.

Dr. M. Price:—Dr. Deaver has given us the strongest reasons why the supra-pubic operation should be selected. The fact that anyone can do it must be an argument in favor of the operation.

An argument against the perineal operation is the fact that in fifty per cent. of the cases of that operation the spermatic duct is injured. The supra-pubic operation has no such risk, and there are no large vessels which may be injured, as is the case in the perineal operation. The supra pubic operation, also, is preferable to crushing. Sir Henry Thompson has had a number of deaths, although he has crushed many cases.

Dr. John B. Roberts:—I feel that I am almost entirely in accord with the reader of the paper. Ever since the publication of the paper of Dr. Dulles, some fifteen years ago, I have felt that the supra-pubic operation was a most desirable one. He soon convinced me of the correctness of his position upon anatomical grounds. In a discussion of this subject before the American Surgical Association, in Washington, in 1884, gentlemen of skill and experience took the position of Dr. Deaver, that it was a good operation, but that the operation *par excellence* was the perineal incision. Dr. Tremaine, who read the paper favoring supra-pubic operation, was entirely in the minority. At that time I said: "I venture to say, that within ten years the supra-pubic operation will be the operation adopted for all cases of stone that are not treated by Bigelow's operation." This was before the brilliant results of supra-pubic cystotomy for tumors of the bladder and enlarged prostate. The supra-pubic route is certainly the most desiriable for those who are but seldom called upon to remove cystic calculi. Those who have undertaken to teach students perineal lithotomy, well know that such inexperienced persons almost as often get between the bladder and rectum as into the bladder. The upper route is accompanied by few complications and gives an opportunity to explore the bladder. From my experience I would say that it is the easier operation and the better one for the tyro.

Dr. A. H. Hulshizer:—I have seen only two cases in which crushing succeeded, but I have seen four in which it failed; in two cases the lateral operation was resorted to, and in two the supra-pubic incision. I think that the supra-pubic is far better than even crushing.

Dr. G. Betton Massey:—Hypertrophy of the prostate is often regarded as a hopeless condition, both from a medical and a surgical standpoint. I have, however, recently had two case of cure of the prostate enlargement. The first case was that of a gentlemen seventy-three years of age, who was sent to me some years ago with an old-standing enlarged prostate. He was treated by me after the plan of mild negative electrolysis in the urethra. The applications were made twice a week, the current-strength being from five to ten milliampéres. I subsequently increased the dosage to twenty-five milliampéres, which produced considerable irritation. The duration of each application was from three to five minutes. This was repeated three or four times, when I lost sight of the case. Two years afterward I met the physician who sent him to me, and learned that the patient claimed that he was entirely well.

The second case was that of a gentleman seventy-four years of age, who for two years had dribbling of urine, and finally had complete retention, necessitating the use of the catheter. The prostate was so large as to interfere with defecation. There was complete retention but no true cystitis. In this case I applied to the prostate gland a current of from twenty-five to forty milliampéres, with the negative pole electrode, consisting of a silver prostatic catheter insulated to within an inch of its extremity. There was hardly any sensation of pain and no irritation following the application. The current was simply turned on and then off. I did not use electrolysis, but a galvanic constringing current. I obtained a galvanic effect on the semi-muscular organ. I also used the faradic current and the galvanic current in the rectum, employing from sixty to seventy milliampéres. As a result of a

month's daily treatment, the man empties his bladder completely, and the prostate is shrunken two-thirds. If we have an agent which can contract these organs, its use is preferable to operation which ablates only one part.

Dr. Hoffman:—The key to the situation is, that Dr. Deaver uses tradition and not logic. Dr. Ashhurst, in the last edition of his *Surgerg*, does not recognize the importance of the operation. Dr. Agnew, in a paper in the *University Magazine*, uses the expression that he does not see the sense of going into a house by the roof when you can get in by the cellar. It, however, does make a difference if there is dynamite in the cellar.

There is one other claim for the supra-pubic operation, and that is its use to afford drainage after operations on the male urethra. In all such operations there is great danger of extravasation, especially when a new urethra is to be made. By supra-pubic incision, this danger can be avoided and the wound can be attended to properly and healed without the additional dangers of urinary infiltration and irritation.

Selected Formulæ.

PRESERVATION OF FEHLING'S SOLUTION.

Of all the tests yet discovered for glucose, perhaps none is more valuable than Fehling's solution. The only objection to its use is its proneness to decomposition and the necessity of preparing it fresh when needed for use. Dr. L. Patel suggests, in the *Lyon Medical*, the following means of obviating this trouble:

Everybody knows that Fehling's has the following composition:

℞

Crys. copper sulph	grammes	34·65.
Tart. sodium; potass	"	173·00.
Soda lye	cm.	300.
Distilled water, q. s. ad	cm.	1000.

The 173 gm. of sodium and potassium tartrate require for solution 300 cm. of distilled water, which added to the 300 cm. of liquor sodæ make 600 cm. of alkaline solution. The sulphate of copper dissolved in the remaining water, there is nothing remaining but to unite the two to have 1 liter of Fehling's solution. This we postpone until it is desired to use the solution, and then we take only so much of them as is needed in the proportion of 6 cm. of the alkaline solution to 4 cm. of the copper solution. We thus have a fresh solution every time. I have used this plan for over a year past, and find nothing in results attained by me to make me believe that either liquid has deteriorated.

HYPODERMATIC INJECTIONS IN PHTHISIS.

Dr. Louis E. Ruiz reports a case of consumption cured by hypodermatic injections (in one year, 827) of carbolic acid. He used one or two syringefuls of the following solution:

℞

Water	parts	l.
Carbolic acid	"	iv.
Glycerin	"	vj.

Bacilli were found in the sputa. The patient enjoyed good hygienic surroundings. Two tablespoonfuls of Churchill's hypophosphites were given daily, with hypodermatic injections of phenic acid. The expectoration finally became very scanty, and the bacilli disappeared; 1037 injections altogether were made in nineteen months. No abscess or local lesion was produced. The case was one of hereditary consumption.—*Gazeta med. de Mexico*, April 15, 1891.

MIST. SYRUPI PRUNI VIRGINIANÆ.

℞

Morphinæ sulphatis	gr. ¾.
Vini antimon	3ij.
Syr. ipecac	3iij.
Syr. pruni virgin.	
Syr. Tolu, aa	3xiij.

M. Sig, Teaspoonful as occasion requires.

—*Weekly Med. Rev.*

CREASOTE GIVEN BY THE RECTUM.

Dr. Revillet (*Gazzetta degli Ospitali*, 1891) administers creasote by means of rectal injections. He uses the following:

℞

Creasot. purissim	gm. ij--iv.
Ol. amygdalar. dulc	gm. xxv.
Aq. destillat	gm. cc.
Vitell. ovi	gm. j.

The injections are generally given in the evening before the patient retires, after a preceding injection to clean out the intestine. Absorption takes place at once, the patient notices the characteristic taste and the urine assumes the blackish or black-green color. At the same time the temperature falls, as after antipyrin. The injections are well supported and absorbed. It is taken up by the branches of the portal vein and eliminated by the salivary glands, pulmonary mucous membrane, and, above all, by the kidneys. One should be certain of the soundness of the liver, heart and kidneys before prescribing creasote in large doses. In tubercular diarrhœa the injections seem to arrest the discharges.

A DISORDERED CONDITION OF THE PRIMÆ VIÆ.

Dr. J. M. Hays, of Oxford, N. C., writes to the *Medical Record:* "A furred tongue—large and flabby, with a bluish cast—anorexia, constipation, perhaps alternating with diarrhœa, slight headache, general lassitude, sleeplessness, loss of interest in business and pleasure. Do you see such cases? Give them.

℞ Podophyllin.....gr. x.
Tinct. nux. vom.....ʒ j.
M. Sig. Shake and take from five to eight drops in a little water before each meal.

You will be pleased with the results. Use this also where nitromuriatic acid seems indicated, but fails to produce the desired result. After an experience of several years with this prescription I can recommend it with confidence."

NAPHTHALIN IN DYSENTERY.

Naphthalin is recommended by Minerbi and by Calphe for dysentery:

℞ Naphthalin.....gr. xv.
Olei theobromæ.....q. s. M.

For one suppository, or

℞ Naphthalin.....ʒ j.
Olei olivæ.....ʒ iv. M.

For a rectal injection, several times a day. The latter is useful also for oxyuris vermicularis in an adult. For children with pin worms the following injection is used:

℞ Naphthalin.....gr. xv.
Olei olivæ.....ʒ x. M.

—*Boston Med. Surg. Jour.*

THREAD OR SEAT-WORMS.

W. Thornton Parker recommends most highly the following: Copious rectal injections of chloride of sodium in solution, or of boro-glyceride, one to twenty, followed by small rectal suppositories of boro-glyceride; a dose of fluid extract of spigelia and senna in the morning, with a moderate dose of castor oil a few hours later, with reasonable attention to errors in diet, and particularly as to water supply, is all the additional treatment required.—*Medical News,* July 18, 1891.

PERMANGANATE OF ZINC IN URETHRITIS.

Berkley Hill has employed with success permanganate of zinc in the treatment of acute urethritis. The drug does not produce irritation of the mucous membrane of the urethra, even when used for a long time, provided the solutions are not concentrated. The following formula is recommended by the author:

℞ Permanganate of zinc.....grammes 0.05.
Distilled water..... " 200.00.
M. Sig. For injections.

NOTE.—Never administer, at the same time, preparations containing alcohol, vegetable extracts, etc., as the permanganate forms with these, highly explosive substances.—*Journ. de Malad. Cutan. et Syphilit.,* October, 1891.

PREPARATIONS OF EUROPHEN.

Eichhoff gives the following in the *Zeitsch. d. Allg. Oest. Ap. Ver.:*

1.

℞ Europhen.....grammes v.
Olive oil..... " x.
Lanolin..... " lxxxv.
M. Sig. "Unguent."

2.

℞ Europhen.....grammes j to v.
Olive oil..... " x.
Gum arabic in powder..... " x.
Distilled water..... " cc.
M. For intra-urethral injections in blennorrhagia.

DIABETES INSIPIDUS.

Prof. DaCosta prescribed the following to stop the large flow of urine:

℞ Antipyrin.....gr. v.
Quininæ sulph.....gr. ij. M.

To be given twice a day, and if this does not act satisfactorily, increased to three times a day.—*Coll. Clin. Rec.*

SEMINAL EMISSIONS.

The following (*Norsk Magazin for Lægevidenskaben,* No. 5, 1891) is praised:

℞ Potassi bromat.
Tinct. ferri muriat. } aa.....grammes xxx.
Aq. destillatæ..... " lxxxx.

One to two teaspoonfuls after each meal and at bed-time.

TREATMENT OF DIPHTHERIA BY CYANIDE OF MERCURY.

Ruelle has obtained good results from the use of this salt internally, recommended by Werner and Lœffler, and as follows:

℞ Cyanide of mercury.....gr. j.
Alcohol.....ʒ ij.
Water.....ʒ vij, M.
Sig. A teaspoonful every hour.

NEURALGIA.

Dr. W. M. Hightower recommends the following:

℞ Ammonii bromidi.
Sodii salicylatis, aa.....ʒ j.
Tinct. hyocyami..... ʒ ij.
Aquæ ad.....ʒ iv.
Sig. One teaspoonful every half-hour until relief is obtained, or four doses have been taken.

—*Memphis Med. Monthly.*

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LEADING ARTICLE.

THE TREATMENT OF HERNIA BY MEDIAN ABDOMINAL SECTION.

In the September number of the *Brit. Med. Journ.*, 1883, Dr. Lawson Tait first made public a proposal to treat certain forms of hernia by median abdominal section. He was led to this idea by the fact that in many cases where he was called upon to operate for ovarian cyst, he succeeded in reducing, by traction from within the abdomen, old irreducible hernias. Finally, he devised a method of suturing together the columns of the ring, for the radical cure of hernia, which he practiced with success in many cases of chronic hernia occurring in females.

Recently (Annual Meeting Brit. Med. Assoc. Bournemouth, July, 1891) Dr. Tait has again brought forward this method of dealing with hernia, and now proposes it for all varieties of hernial protrusions, with or without strangulation, and for the radical cure of hernia. His claims for the superiority of his method over the ordinary operations performed, are chiefly as follows: (1) the strangulation is relieved without enlargement of the tendonous aperture through which the hernia has escaped; (2) the operation is a simplification of existing methods; (3) reduction is more easily accomplished by traction upon intestine or omentum from within the abdomen than by taxis performed externally; (4) the diagnosis is rendered certain as soon the fingers have access to the intestinal ring; (5) the radical cure by suturing together the columns of the ring from within is a less grave operation than incision of the sac often is. Dr. Lawson Tait's method, by which, he says he has succeeded in curing many cases of chronic hernia in women, consists of a medium suprapubic incision, the relief of strangulation or of chronic protrusion by gentle traction from within upon the protruded intestine or omentum, and after this has been accomplished the application of his method for radical cure, which he describes as follows: "Two

common glover's sewing needles armed with one piece of salmon silk-worm gut are fastened in some convenient needle-holder at a very slight angle to one another, so that their points completely coincide, and can be made to enter through one hole in the skin. The left forefinger covers or occupies the inner aperture of the sac, the needles are made to enter from without, and are then separated. The outer needle is then made to dip deeply into the external column of the ring, and the inner needle similarly into the inner column. The needles are then pulled out through the central incision, and as many sutures as may be thought desirable are inserted in this way. When the insertion of the stitches is completed, they can be tied from within and cut short. The abdominal wound is then closed properly and the operation is over."

Such is then the operation which this distinguished surgeon has strongly advocated and pressed upon the notice of his English colleagues at the last meeting of the British Medical Association; while his suggestion was most conservatively received by the majority of the able surgeons present, still, this surgical inovation is not deemed advisable in some cases, was evidenced by the remarks made by several distinguished operators. One of the chief objections to this mode of operating for the relief, for example, of a chronic irreducible inguinal hernia, is, that very often old adhesions will prevent reduction by traction from within, and thus a second incision opening up the sac will be a necessity. This happened in one of Dr. Lawson Tait's own cases, but he does not regard a secondary incision over the sac as a serious complication to the operation. Another objection which will instantly occur to anyone having any practical knowledge of strangulated hernia, is, that where the strangulated part has become gangrenous, traction from within would certainly rupture the gut; but Dr. Tait considers the median suprapubic incision a better place for an artificial anus than in the groin.

We cannot think that Lawson Tait's abdominal incision should be used in ordinary cases of strangulated hernia, but that his original suggestion is a very valuable one no one can deny. In umbilical, or in obdurator hernias the introduction of two fingers, and the manipulation with traction possible in that way, would seem of decided value, while for diagnostic purposes such an incision would be an addition to our best of surgical procedures in such cases.

The high position occupied by Dr. Lawson Tait as a surgeon, and the discussion which his very radical suggestion for the treatment of hernia has evoked, will undoubtedly lead to an extensive trial of his operation in cases that are suitable for it. Dr. H. Widenham Maunsell, lecturer on Surgery in Otago University, Dunedin, N. Z., highly recommends abdominal section in strangulated femoral, odurator, umbilical, and diaphragmatic hernias. He only differs from Tait's method by using needles with handles armed with silver wire, which he twists up tight outside, instead of the silk-worm gut sutures which Dr. Tait ties inside the abdomen.

It is to be hoped that this mode of dealing with hernias will receive careful consideration from our own surgeons, and that, if the procedure is found of real value, its true limitations will soon be ascertained.

PERISCOPE.

THERAPEUTICS.

SULPHATE OF MAGNESIUM IN EPITHELIOMA.

The treatment of warts by the internal administration of small doses of sulphate of magnesium is said to have been attended with a considerable amount of success, even large growths disappearing under the remedy when persisted in for a sufficient length of time. It is now claimed that epitheliomatous warts may be dispersed by the same means, a paper on this subject having been read before the New Hampshire Medical Society by Graves. Three drachms of the salt are added to a pint of water, and a teaspoonful of the mixture taken four times a day. The author gave an account of eight cases in which the treatment had been adopted with success; but he admitted that the possibility of erro-

neous diagnosis had to be considered. It was, however, a fact that growths of an elevated character with round or oval bases and ulcerated summits discharging an ichorous fluid were transformed by the treatment into perfectly healthy spots, which exhibited no signs of diseased structure, and his conclusion was that the result was obtained by the remedy employed.—*Med. Press.*

FELL'S OPERATION (TRACHEOTOMY) IN MORPHINE POISONING.

The recent successful termination in this Hospital of a case of morphine poisoning, in which the patient had taken 20 grains of the drug, leads us to speak of the plan of treating extreme cases of narcotic poisoning introduced to the profession by Dr. Fell, of Buffalo. The operation consists in a tracheotomy and the use of a pair of bellows, which provides for driving air into the lungs and by means of a valve lets the carbon loaded air escape from the lungs. It insures a constant supply of fresh air to the pulmonary capillaries, at the same time that it promotes the escape of air laden with organic products of respiration, which may have been exerting an influence tendering to the death of the patient.

The case referred to was an extreme one. She was 21 years old; not addicted to morphine. Took 20 grains and vomited none of them. Her respiration was, at the time, but four per minute. She was anæsthetized by the drug. Artificial respiration by the Sylvester method had been thoroughly tried. The trachea was opened by incision and a tube inserted; then a hand bellows was attached and for three hours the respiration was kept up. At the end of that time the reflexes began to return and it was apparent the case was saved.—*Detroit Emergency Hosp. Rep.*

OPIUM IN CHRONIC CONSTIPATION.

Dr. Nevins (*Il Raccoglitore Medico*, No. 14, 1891), in chronic constipation, to overcome the chronic irritation and subacute inflammation of the colon present, employs Dover's powder (12 grs.,) with turpentine fomentations to the abdomen, with the best results. He exercises great care in the patient's diet, and avoids purgatives.

MERCURIAL INUNCTION IN GLANDERS.

Gold (*Berlin. klin. Wochenschr.*, October 5th, 1891) publishes the case of a man, aged 32, suffering from a severe attack of glanders, inflammatory deposits being present in the right thigh and leg and the left arm. There was no history of equine infection, but the nature of the attack was proved by the presence of the characteristic bacillus under the microscope, and, further, by the fact that pus taken from the inflamed areas communicated glanders to animals inoculated with it. The treatment adopted by Gold was (as in a similar case published two years ago) to incise the phlegmonous areas and dress the wounds with corrosive sublimate (1 to 1,000) and iodoform gauze. The other important feature in the treatment was the use of mercurial inunctions, sixty-two applications being spread over eighteen days. The results were highly satisfactory. The temperature, which at first reached 104° F., gradually subsided, the wounds cicatrized, and the general condition of the patient improved so rapidly that he was before long discharged quite well.—*Brit. Med. Jour.*

THE TREATMENT OF PURULENT OPHTHALMIA.

At a recent meeting of the Harveian Society, Mr. Jules gave an interesting lantern demonstration on the chief varieties of ophthalmia. In speaking of purulent ophthalmia, he strongly recommended the hourly use of a weak solution of perchloride of mercury (1 in 5,000) to cleanse the conjunctival sac, combined with the daily application of strong nitrate of silver solution to the everted lids. Division of the outer canthus was recommended, if necessary, to gain access to the conjunctival surface, and to relieve tension on the globe. Dr. Boxall stated that acid solution of quinine (gr. v. to ʒj) and boracic acid solution had been employed with success at the General Lying-In Hospital ten years ago. The President (Mr. Cripps Lawrence) spoke highly of liquor sodæ chloratæ.—*Brit. Med. Jour.*

OZONE FROM A PHYSIOLOGICAL AND THERAPEUTIC POINT OF VIEW.

Heretofore, in order to obtain the biological properties of ozone, animals have been shut up in closed receptacles traversed by a current of ozonized oxygen, prepared chemically, or by the action of electricity on oxygen. This *modus operandi* is unfavorable, and has given rise to the opinion the respiration of ozone is dangerous.

Prepared chemically, ozone is impure and mixed with toxic compounds—phosphorous

acid, for example. If it be prepared with pure oxygen, considerable quantities are obtained which, mixed with oxygen non-transformed, constitute a compound dangerous to respire, especially in an enclosed space. The results are absolutely different if we obtain the conditions approaching those of the habitual production of ozone, that is by causing animals to respire a mixture of atmospheric air and ozone; in the latter cases accidents are never observed.

Messrs. Labbé and Oudin have prepared ozone by passing a current of air through two concentric tubes 3 to 4 millimetres apart, the intervening space being traversed by electric sparks. To obtain a sufficient quantity of ozone, they take the interior tube, sealed, and containing the rarefied air, which acts as a perfect conductor and is perfectly applied to the surface of the dielectric, which is the glass. The other armature of this form of condensor is constituted by a metallic sheet applied to the internal face of the external tube, and it is between this metallic sheet and the surface of the internal tube that are formed the sparks engendering the ozone. The slightest elevation of temperature which is produced in the cylindrical space separating the two tubes, is sufficient to produce a current of air, ascending and bearing along the oxygen formed. Under the circumstances, the air does not contain more than 11 to 12 hundredths of a milligramme of ozone per litre, which the authors called the therapeutic dose. In subjecting animals and themselves to inhalations of air ozonized in these proportions, the quantity of ozone respired in about a quarter hour is 2 milligrammes—a dose hitherto reputed dangerous, and yet inhalations continued for several hours under the foregoing circumstances have produced no disquieting symptoms. Convinced of the absolute innocuousness of these inhalations, Messrs. Labbè and Oudin have experimented with cachectic patients and even with children of tender years.

It is known that the quantity of oxyhæmoglobin contained in the blood is 13 to 14 per cent. If a subject whose blood contains only 10 to 11 per cent. of oxyhæmoglobin (which is the ruling proportion with city people), be subjected to inhalations of ozonized air, an augmentation of 1 per cent. will be found at the end of a quarter of an hour. This increase persists only for 12 to 24 hours, if the patient takes no more inhalations, but, if they be renewed every day, the quantity of oxyhæmoglobin continues to augment little by little until it reaches the physiological figure.

We know also that ozone is a powerful germicide, capable of arresting most advanced fermentation, even in small doses. On the other hand, the tubercular bacillus is gifted with the greatest resisting power to antiseptics. Will ozone act on this bacillus as on so many others? This is what Messrs. Labbé and Oudin have sought to determine.

For this purpose they have instituted the following experiments with the coöperation of M. Veillon: they took a culture of tubercular bacilli, on peptonized gelatin, which they divided into four tubes. Two of these tubes were traversed during two hours by a current of ozonized air, furnished by the apparatus above described, and the cultures were inoculated into guinea pigs which are yet living, fifty days after inoculation. The other tubes, non-ozonized and preserved as witnesses, were inoculated into guinea pigs which succumbed after 25 days. Without attributing to this experiment more importance than it merits, the authors consider it interesting and encouraging.—Helfman, in *Med. Age.*

NITRO-GLYCERIN FOR NEURALGIA AND PHYSICAL DEPRESSION.

Dr. John N. Upshur said that he had been sent for recently to see a woman, aged 35, whom he found suffering from acute diarrhœa rapidly going on to dysentery, with a neuralgic headache, insomnia, irritable stomach, and great depression. The bowels were controlled by enemata. On account of the depression and irritability of stomach, the administration of such analgesic remedies as phenacetine, antipyrin, etc., was not considered advisable; so he determined to employ and observe the effects of nitro-glycerine. One one-hundredths of a grain was given 11.58. In three minutes its effect, as manifested by increased tension of pulse, could be positively identified. In two minutes more, she expressed herself as greatly relieved, and experienced a desire to sleep. By ten minutes past twelve (twelve minutes since the administration of the remedy), the patient was comfortable, and the doctor left, leaving an additional dose with the husband with instructions to administer if there should be a return of the depression or headache. When seen in the evening, there had been no recurrence of these distressing symptoms, and consequently

no occasion for a repetition of the dose.—*Virg. Med. Monthly.*

DESTRUCTIVE ACTION OF CARBOLIC ACID.

A. Frankenburger (*Inaug.-Diss., Erlangen,* 1891,) warns against the injury to skin, and even bone, which may result from the long-continued application of weak (3, 2½, and even 2 per cent.) carbolized applications, especially upon peripheral portions of the body, such as the fingers. This effect is due in a small measure to the action of carbolic acid upon the vaso-motor system, but in the main to its destructive effect upon the red and white blood corpuscles. This induces, partly in a mechanical and partly in a chemical way, stasis, first in the capillaries, and, if the action of the drug be continued, then in the larger veins and arteries, with the result that the nutrition of the part is interfered with, and the removal of harmful substances hindered. The maceration of the epidermis caused by the acid favors evaporation, so that the gangrene is a dry one, a mummification as it were. The author believes that even weak carbolic solutions as external applications are to be either completely discarded, or to be used only with the very strictest precautions, and that the sale of carbolic water by druggists should be wholly stopped.

A READY AND EFFECTIVE REMEDY FOR INSECT STINGS.

As soon as possible after being stung saturate the corner of a handkerchief with fresh urine and apply freely. As soon as the liquid has penetrated to the poison the pain subsides, the inflammation soon disappears, and in a very short time scarcely a trace of the wound remains. The completeness of the cure depends somewhat on the length of time allowed to pass before applying the remedy; for if the poison is completely absorbed, and its destructive effects accomplished before the antidote is used, such complete and instant relief cannot be expected.

About fifteen years-ago I had occasion to give this remedy a severe test. With others, one a small boy, I was exploring a forest on the mountain. We had separated, when I was startled by terrific screams. Rushing toward the sound, I met one of the party dragging the boy away from a hornet's nest. He was covered from head to foot with yellow hornets, and was writhing and screaming in agony from their stings. Finding it impossible to beat off the insects in time to prevent further serious injury, I seized him by the collar and dragged him at high speed through the thick bushes for many rods. When we finally emerged into an open space the hornets had been left behind. The child was instantly undressed and handkerchiefs saturated with fresh urine applied repeatedly to his numerous wounds. In a very short time the little fellow exclaimed, "I'm all right!" and commenced to dress himself. He suffered no further inconvenience from the stings, and before we reached home nearly every trace of them had disappeared.

I think the active agent in antidoting the insect venom is the urea. I always intended to carry experiments further and test its effects on the venom of reptiles, but circumstances have prevented.

An acquaintance of mine in those days, an intelligent man, used to relate his experience in two cases of snake bites; one of a rattlesnake, the other a red adder. He claimed they were both cured by chopping the snakes into short pieces, splitting them open and applying them in succession to the wound. We are told that the contents of the intestines of snakes consist almost entirely of crude urea, and I have thought it possible that enough of this got into the wounds in these two cases mentioned to at least partially antidote the poison.—Wm. H. Terry, in *Medical Progress.*

TREATMENT OF BURNS AND SCALDS

Having observed the good results obtained from the application of rubber cloth to wounds upon which skin has been grafted, as well as to the surface from which the graft has been taken, Dr. O. P. Barber, of Saginaw, Michigan, has suggested a similar procedure in the treatment of burns and scalds. The burned surface is freely irrigated with carbolized water, all necrotic tissue removed and blebs punctured. Then the entire wound is snugly wrapped in rubber tissue that has been kept in a carbolized solution. Over this is placed absorbent cotton and a bandage. The advantages claimed for the dressing are that it relieves pain, that it does not adhere to the wound, that it excludes air, and that it protects the granulations, whilst preventing their exuberant growth.—*News.*

THE GERMICIDAL ACTION OF EGG ALBUMIN.

A. Wurtz (*Compt. Rend. Soc. Biolog.,* 42, 20; *Ber. Deut. Chem. Ges.,* 24, 465,) found

that by the digestion with the uncooked white of egg at 38° a small number of bacillus anthrax, cholera-spirillum, Ebert's bacillus, bacillus pyrogenes aureus, and of bacillus subtilis were killed. This property of the albumin prevents the invasion of eggs by bacteria. Coagulated egg albumin has no germicidal properties.

CONSIDERATION OF CERTAIN NEW REMEDIES EMPLOYED IN THE TREATMENT OF CUTANEOUS AFFECTIONS, AS SUBSTITUTES FOR IODOFORM.

E. Chatelain (*Journ. d. Maladies Cutan. et Syph.*,) discusses the objectionable characteristics of iodoform and then reviews the literature of aristol, bromol, cresalol, eugenol, iodol, lysol, camphorated naphthol, retinol, salol and camphorated salol, sozoiodol, and eulyptol.

Among these aristol is perhaps the most important. Chatelain himself found it useful in varicose ulcers; in syphilitic chancre the effect was not more rapid than iodoform, but in a case of eroded papules of the glans penis he obtained a cure with it in a few days. He experienced a complete failure with it in a case of ulcerating epithelioma of the face, which had first been treated surgically by himself. He was obliged, in order to obtain healing, to have recourse to iodoform.

The various observers who have recorded their opinions find that aristol is valuable in syphilitic ulcerations of all kinds. Some speak favorably of its use in chancroids, others, however, the opposite. The majority have obtained good results with it in suppurating buboes, psoriasis, lupus, and eczema, still there are some who obtained the opposite. The same conclusions are also recorded in connection with epithelioma. The author concludes that aristol is worthy of being retained among dermotherapeutical agents and may prove to be, in the end, a precious successor and substitute for iodoform.

Among the others eugenol may be mentioned, an oleaginous liquid obtained from cloves insoluble in water, but soluble in alcohol and in ether. Unna found that it destroyed lupus nodules without pain; Leubuscher used a 70 per cent. ungt. on a case of very pruritic, weeping eczema with immediate removal of symptoms.

The author has also obtained excellent results from the use of iodol in 10 cases of ulcerating gummata. In 20 cases of chancroids the action of the drug was favorable, but it was less than iodoform.

According to the reports, camphorated naphthol has acted well in ulcerations of various nature, in buccal tuberculosis, and also in mycosis fungoides. Nélaton claims that in 27 cases in which he injected into tubercular glands from 7 to 8 drops, a cure was obtained in 21. On the other hand, another observer reports no results from the drug in a case of cutaneous tuberculosis with maxillary and inguinal adenitis.

INHALATIONS OF HYDROGEN DIOXIDE IN DISEASES OF THE RESPIRATORY ORGANS.

Dr. Gabrilovicz has employed inhalations of peroxide of hydrogen in cases of phthisis. The patients presented all the symptoms of the disease (infiltration at the apices, bronchial breathing, râles, loss of flesh, night-sweats, occasional hæmoptysis, etc.). A solution of peroxide of hydrogen in water, in the proportion of one to ten parts per hundred, was employed, the weak solution at the beginning. The inhalations were continued for several months. Six patients treated in this manner were greatly improved, the pulmonary symptoms being greatly ameliorated. The cough was relieved, the expectoration diminished, and in some cases the consolidation was reduced. Although the author's observations are limited, the results are certainly encouraging. Dr. Gabrilovicz thinks that inhalations of peroxide of hydrogen will prove very serviceable in the various forms of laryngitis, tracheitis, bronchitis and also in the early stages of laryngeal and pulmonary phthisis. He also advises this treatment in laryngitis stridulus, whooping-cough, asthma. In tubercular laryngitis it is best to commence with a five per cent. solution of the peroxide; in other diseases it is advisable to employ at first a one per cent. solution, gradually increasing the strength until the proper dose is reached.—*Gaz. Med. de Liége.*

MEDICINE.

ULERYTHEMA SYCOSIFORME.

Sack (*Monats. f. prakt. Derm.*, No. 4, August, 1891) describes an example of a skin disease affecting the face, which has been described by Unna under the above name. The case occurred in Unna's clinic, in a man aged 24. The affection began on

the left temple, causing complete baldness and atrophy of the skin. It advanced slowly in the direction of the beard, and produced symptoms of severe irritation of the skin, was attended with loss of hair and progressive diffuse atrophy of the affected part of the cutis. The characteristic symptoms were the extremely chronic and slowly progressive nature of the affection, its serpiginous course, and its intractability. In the later stages of the disease a considerable amount of pus is formed. Relying on a histological examination, Sack considers that the affection may properly be described as "dermitis (not dermatitis) perifollicularis parenchymatosa atrophicans." It is, in fact, a chronic inflammation of the cutis, especially occurring in the connective tissue around the follicles, accompanied by growth of the cellular elements of the cutis, and finally atrophy of the skin.—*Brit. Med. Jour.*

HOUR-GLASS CONTRACTION OF THE STOMACH, WITH LARGE ULCER.

Dr. R. Saundby (*Birmingham Med. Rev.*, October, 1891, p. 228), relates the following case: A woman, aged 31, was admitted to hospital complaining of severe pain and tenderness in the stomach. On the day of her admission, she twice vomited watery fluid matter, depositing a sediment like coffee grounds. Seven years before, she had suffered from "ulcerated stomach" with coffee-grounds vomit. Again, four years ago she was ill with the same complaint, but she did not remember any hæmatemesis. Her present illness dated from six months previous to her admission; it began with pain in the left hypochondrium radiating round to the back, and vomiting, sometimes immediately, at other times two hours after food, but no hæmatemesis till four months from the beginning of the attack, when she vomited a quantity of blood, and passed a lot by the bowel. She complained of great flatulence and acidity, and of frequent pain over the stomach, which was at once greatly increased by taking food, and was only relieved by vomiting, which occurred usually half an hour to an hour after a meal. The abdomen was retracted and soft, except just to the left of the epigastric region, where there was some resistance and pain on pressure. She was first treated with milk and lime water, but as the sickness continued she was fed by nutrient enemata alone, for a short time, after which the milk, etc., was resumed, but eighteen days after admission the vomiting and pain were very troublesome. The vomit was described as being like thick yeast, very foul-smelling, alkaline, and gave no evidence of containing free hydrochloric acid. The vomiting continued, and rather more than two months after admission she was suddenly seized with symptoms of perforation, intense pain in the abdomen, vomiting, and collapse, and died the same evening. At the necropsy general septic peritonitis was found. The stomach was hour-glass shaped, and bound down to the left lobe of the liver by old inflammatory adhesions. It was divided into two cavities by a narrowing situated about five inches from the pylorus; the opening between the two admitted one finger. There was no appearance of a cicatrix or thickening here, and the microscope showed no changes in the mucous or submucous coats around it. In the cardiac portion there was a large ulcer, about four inches long, situated along the greater curvature. This had exposed the pancreas, to which it was everywhere adherent, except at one point which had given way. The exposed pancreas, was ragged and partly digested. The hour-glass contraction presented all the features of a congenital malformation, that is to say, there were no indications of any inflammatory process to cause the constriction.—*Brit. Med. Jour.*

NERVOUS AFFECTIONS IN INFLUENZA.

In a paper communicated to the Chicago Medical Society, June, 1891, Church refers to many of the nervous complications and sequelæ of recent influenza epidemics. He finds in the records of the Chicago Health Office that in the years 1888 and 1889 there was very trifling variation from month to month in the death-rate from nervous diseases. Under the subheadings cerebro-spinal fever, apoplexy, convulsions, and meningitis, the mortality was also equally distributed. In 1890 there was a great increase in the number of deaths from nervous diseases—mainly under the heads "meningitis" and "convulsions"—for several months following the subsidence of the *grippe*. During the first four months of 1891 the deaths assigned to these causes much exceeded twice the average of preceding years. When divested as far as possible from all falsifying circumstances, the lunacy reports of the Cook County Court show a marked increase in the number of persons becoming insane during the prevalence and decline of the influenza.—*Brit. Med. Jour.*

THREE CASES OF ELECTRICAL TRAUMATIC NEUROSIS.

Dr. James W. Putnam gives in the *Buffalo Medical and Surgical Journal* some very interesting notes: In July, 1890, during a severe thunder and lightning storm, three telephone operators received an electric shock, from an unusually vivid flash that passed through the lightning cut-off with which the key-board is supplied. At the time of the shock each operator was wearing a metallic arrangement closely fitted to the head, which holds the receiving phone in position against the ear. They were each holding a metal plug in the hand, preparing to make a connection on the key-board.

No. 1 was a large, healthy, well-developed young woman of Irish decent, aged 20. She was rendered unconscious for a few moments. On regaining consciousness, she complained of severe headache, and of deafness of the left ear, which was in contact with the phone, and which received the shock. Examining this patient, Dr. Putnam found complete cutaneous anæsthesia of the left side, the pharynx and conjunctivæ. There was no paralysis. From the symptoms he diagnosticated the deafness to be functional, and treated it as such by suggestion, with the result that the hearing was perfectly restored. The headache remained, and only yielded to bromide of potassium.

No. 2. A young woman of German parentage, with previous good health. She was in bed when Dr. Putnam first visited her. She said it made her dizzy to stand up, and made her headache worse. Examination showed cutaneous anæsthesia of left side of face and scalp, left side of thorax anteriorally, left arm, conjunctivæ anæsthetic. The anæsthesia disappeared after two treatments with the faradic brush, briskly applied. In addition she took a spinal douche, 40 degrees, 15 seconds, daily. The headache was treated with 20 grs. pot. brom. and 15 drops ergot. The headache disappeared, but always came back if she attempted work at the telephone office. Believing this to be a headache suggested to her by the sight of the apparatus from which she received the shock, Dr. Putnam hypnotized her, and suggested that she should have no more headache, either at home or at the telephone office. She has remained well, has returned to work, and has had no return of headache.

No. 3. A slight girl, aged 21, of American parentage; was rendered unconscious for a few moments by the shock, was taken home, and was delirious for one hour, after which she became quiet; complained simply of throbbing headache. Examination discovered anæsthesia, as in the others, of the left side. Sensation was restored by one application of the faradic brush; headache disappeared after a few doses of pot. brom.

The similarity of the cases at once strikes us. There was headache and anæsthesia in them all, and each showed susceptibility to suggestion. Dr. Putnam believes these cases to be a combination of hysterical symptoms of anæsthesia, with the headache we naturally expect to result from severe electric shock.

THE DIAGNOSIS OF DISEASES OF THE CORPORA QUADRIGEMINA.

Eisenlohr (*Centralblatt für klin. Med.*, No. 30, 1891,) reports in detail a case of gunshot injury of the corpora quadrigemina. The lesion affected the tubercles of the corpora quadrigemina on the right side, destroying a great portion of both, together with the right habenula, a part of the right anterior brachium of the corpora quadrigemina, and extended close to the neighborhood of the aqueduct of Sylvius and the nucleus of the third nerve. The first and most important symptoms were abnormalities in the movements of pupils, diminution of the reaction of both pupils to light, and dilatation of the pupil on the same side as the lesion. At first there were none of the other symptoms regarded as characteristic of lesion of the corpora quadrigemina. These occurred later through secondary changes in the immediate neighborhood of the foreign body which had penetrated this region.

From his observation Eisenlohr draws the following conclusion respecting affections of the corpora quadrigemina.

The abnormalties in the movements of the pupils possess a higher importance in the diagnosis of affections of the corpora quadrigemina than one has ascribed to them. The ataxia is to be regarded as a symptom of lesion of the corpora quadrigemina. Probably for its occurrence the affection of a very limited portion of the posterior tubercles of the corpora quadrigemina is necessary.

A certain diminution of vision, independent of optic neuritis and optic atrophy, and without lesion of the optic tract, can be produced entirely by affection of the anterior tubercles, and of the anterior brachia of the corpora quadrigemina.

DEATH FROM PYEMIA AS A RESULT OF THE STING OF A FLY.

Paltauf (*Wiener klin. Wochenschr.*, No. 35, 1891) has recorded the case of a woman, thirty years old, who was stung on the right eyelid by a fly. On the following day there were considerable swelling, redness and pain in the right temporal region, with fever, and to these were added cerebral symptoms. On the second day manifestations of collapse appeared, with heart-failure; death ensued on the morning of the third day, little more than forty-eight hours after the fly-sting.

At the autopsy, in addition to the conditions observed during life, there were found multiple phlebitic thrombi and abscesses in the texture of the right temporal muscle, thrombi in a radicle of the cavernous sinus and in the sinus itself, an excess of fluid in the pleural cavities, and multiple, softening, hæmorrhagic and purulent thrombi in the lungs. There were also parenchymatous swelling of the kidneys and liver and acute enlargement and softening of the spleen. The pus of the phlebitic abscesses in the temporal muscle, of the pulmonary infarcts and incipient abscesses, and the fluid of the spleen contained many cocci, which on culture proved to be principally staphylococci aurei together with staphylococci albi.

DESTRUCTION OF SUGAR IN THE BLOOD.

Lépine and Barral (*Comptes Rendus*, cxii, Nos. 5 and 8, 1891) collected some arterial blood from a dog in a vessel cooled to 0° C., then defibrinated it, and at once estimated the amount of sugar it contained. Other samples of the same blood were kept at different temperatures; *b* at 39°, *c* at 49°, *d* at 52°, and *e* at 55° C., and left for one hour. After this time the amount of sugar in *b* was found to be $\frac{1}{4}$, in *c* and *d* $\frac{3}{10}$ to $\frac{2}{5}$ less than in *a*, while in *e* it was the same as in *a*. This shows that the "sugar-destroying ferment" acts better the higher the temperature, until at about 54° C. its activity is destroyed. If blood withdrawn from an artery be centrifugalized, one obtains a serum which of course contains more sugar than the original blood, because the corpuscles contain scarcely any sugar. If such serum be kept at 39° C. for some time—for example, one hour—there is no diminution in the amount of the sugar, while blood similarly treated loses $\frac{1}{4}$ of its sugar. If the corpuscles which are separated by the centrifugalizing process be washed with saline solution, a filtrate is obtained which, if mixed with grape sugar, causes a part of the latter to disappear when the mixture is kept a 39° C. It would seem, therefore, that the "sugar-destroying ferment" is present in the blood corpuscles.—*Brit. Med. Jour.*

PURULENT PLEURISY.

Courtois-Suffit has made a study of the subject of purulent pleurisy, and presents certain facts of practical importance. Bacteriological research has revealed the existence of several varieties of purulent pleurisy, the etiology, symptoms, course, prognosis, and treatment of which differ with the active infectious agent. Three main groups may be recognized; 1, pleurisy due to the pneumonia-coccus of Fränkel; 2, that due to streptococci; 3, that due to the baccillus tuberculosis. In addition, there may be the following mixed forms: 1, pleurisy due to pneumonia-cocci and streptococci; 2, that due to streptococci and staphylococci; 3, that due to the bacilli of tuberculosis and streptococci; 4, putrid and gangrenous empyemata, caused by the microbes of suppuration associated with certain saprogenic organisms. There are, besides, rare forms of purulent pleurisy due to the bacillus of Friedländer, to the staphylococcus pyogenes, and to the bacillus of Eberth. In the pleurisy due to pneumonia-cocci—metapneumonic pleurisy—the pus is thick, greenish, creamy, without odor; the pleura is covered with false membrane, shreds of which may float in the effusion; the pleurisy has a tendency to become encysted; it often terminates in a vomica, and rarely becomes chronic; it may be primary, associated or not with other pathological conditions due to the pneumonia-coccus, in which case its onset is sudden; or it may appear insidiously in the course of a pneumonia or suddenly during defervescence; the temperature is that of a continued fever, without oscillations or irregularities; the effusion is copious in the acute primary form, moderate in the latent; the pleurisy terminates by absorption or by the formation of an encysted vomica; the prognosis is favorable; the mortality does not exceed five or ten per cent.; in this form, especially, is simple puncture justifiable. Purulent pleurisy due to streptococci may develop in the course of a constitutional affection caused by the same organisms as puerperal fever; in connection with other pathological conditions arising from infection by streptococci, as broncho-pneumonia and peritonitis, and

secondarily to remote affections, as an otitis or a phlegmon: the pus is thin, yellowish, without odor, flocculent, and shows no tendency to become encysted. Occurring in the course of another affection the pleurisy is latent and insidious; appearing at the termination it may be acute, frank, and painful; its evolution is slower than in the case of pleurisy due to pneumonia-cocci; the temperature is that of suppuration due to streptococci, with decided remissions and exacerbations; the effusion, usually moderate in degree, never yields to simple puncture; it shows no tendency to absorption or spontaneous evacuation, and only exceptionally gives rise to vomicæ; death may occur from septicæmia or purulent infection; the duration is long; the mortality about twenty-five per cent.; early and radical operative interference is necessary. The bacillus tuberculosis alone may occasion a purulent pleurisy, comparable to a cold abscess; the pus is thin, yellowish, opaque, without odor and flakes of fibrin; the pleura is thickened by many layers of superimposed plastic exudate, containing tuberculous nodules; the pleurisy may set in frankly and acutely, or may be insidious and latent, the patient sometimes remaining unconscious of the presence of the effusion, though this be abundant; during the active stage the general health may be preserved, febrile reaction may be absent, and the fluid slowly but persistently reaccumulates; a fatal result occurs sooner or later, according to the course of the pulmonary disease; repeated puncture is necessary. In the purulent pleurisies due to mixed infection the condition assumes the gravity occasioned by the most virulent microbe. The association of streptococci and staphylococci gives rise to a pleurisy of grave type, insidious onset, irregular course, with the signs of pyæmia and wide range of temperature; early and energetic treatment by means of incision and lavage is required. Pleurisy from streptococci may be a complication of pulmonary tuberculosis; although curable it may prove a serious complication, necessitating, perhaps, the operation for empyema. The pleurisy occasioned by the microbes of suppuration is especially grave when pulmonary cavities exist; the prognosis is then almost fatal. The putrid and gangrenous pleurisy rapidly gives rise to the grave general manifestations of sapræmia, it necessitates speedy and energetic intervention.—*Gazette Méd. de Paris*, No. 12, 1891.—*Amer. Jour. Med. Sci.*

DEFECTIVE INTER-VENTRICULAR SEPTUM WITHOUT CYANOSIS.

Wilbouschewitch (*Bulletin de la Soc. Anat. de Paris*, 1891, No. 2) reports the case of a seamstress, twenty-five years of age, with a tuberculous family history. The patient had been uninterruptedly at work, when suddenly a copious hæmoptysis took place. She was pale and thin. The chest was small and flat; the vertebral column kyphotic. The percussion note was dull and the respiratory murmur feeble over the upper third of the left lung. Râles and friction-sounds were heard, in greater number on the right. There was a little cough and expectoration. At the apex of the heart both a presystolic and a systolic murmur were heard and a purring tremor felt. Duplication of the second sound was heard at the base. A second copious hæmoptysis in the course of a few days, was followed by death. At the autopsy pleural adhesions were found, and the lungs contained many tubercles and some cavities. The heart was relatively large; the vessels were given off normally; the mitral orifice admitted two fingers. The inter-ventricular septum was defective at its upper part, and by the foramen thus formed the ventricles communicated; the opening was oval, slightly elongated transversely, and about as large as a two-franc piece; the lower portion of the septum was thickened, its upper free border was smooth; a thin band of muscular tissue intervened between the abnormal opening and the aorta; the mitral and tricuspid leaflets came in contact; a tendon of a leaflet of the tricuspid valve was inserted into the free border of the opening, before which the left tricuspid leaflet was stretched like a curtain. The pulmonary artery was dilated; the vessel bifurcated just above the valve, its branches in the lung were also dilated. Upon the endocardium of the right side of the heart and of the branches of the pulmonary artery were numerous patches and lines, probably the evidences of a fœtal endocarditis. During the ventricular systole the defect in the septum had apparently been partially closed by the tricuspid valve, preventing the admixture of venous and arterial blood and the production of cyanosis.—*Amer. Jour. Med. Sci.*

Quinine has been found to possess strongly pronounced cardio-tonic properties and hence will retard and strengthen the heart's action during pyresis.

SURGERY.

EXTIRPATION OF THE GALL-BLADDER, WITH THE ESTABLISHMENT OF A COMMUNICATION BETWEEN THE DUODENUM AND THE COMMON CHOLEDOCH DUCT.

In operating upon a woman forty years old, with calcular obstruction of the cyst duct, Sprengel (*Deutsche Medicin. Wochenschr.*, Sept. 3, 1891) mistook the cystic duct, and the common duct for the intestine. By expression the calculus was forced from the cystic into the common duct, and it was thought that the biliary passages were free. The symptoms continuing, however, the abdomen was again opened, and two calculi were found, one in the cystic duct, and the other at the transverse fissure of the liver. On account of the former the gall-bladder was removed, and the cystic duct was ligated; the second calculus was crushed. To overcome the obstruction in the common duct an artificial communication was established with the duodedum. Three months later the patient had recovered, and was free from symptoms.

TREATMENT OF CONGENITAL PTOSIS BY MEANS OF NAPHTHOLATED CATGUT.

Dransart has devised an operation for the relief of congenital ptosis, in which an artificial tendon, created from the frontal muscle, takes the place of the absent or atrophied levator palpebræ. The new tendon is made by means of subcutaneous sutures uniting the superior border of the tarsal cartilage with the superciliary muscle. The success of the operation depends upon the asepsis of the sutures and placing them in the deep, connective tissue layer of the skin. Sterilized catgut has answered admirably, except that it is absorbed in the course of two or three days, while twelve to fifteen are required to obtain a suitable artificial tendon.

Dehenne has found that by preparation with a solution of napthol the rapidity of absorption of cat-gut may be sufficiently retarded so as not to jeopardize the success of the operation. He reports a case in which the result obtained was excellent.—*Jour. de Med. de Paris.*

THE TREATMENT OF VARICOSE ULCERS.

Dr. J. Hartman recommends ichthyol in the treatment of varicose ulcers of the leg. After cleansing the sore with soap and warm water he applies pure ichthyol to the ulcerated surfaces and covers them with a thick layer of cotton, which is secured by an unstarched gauze bandage. The application produces an intense burning pain which usually lasts only for a short time. During the following days the patient experiences great relief, but as soon as the sore again gives rise to pain or discomfort, the dressing must be changed. Even at the first change of dressings, the ulcer will be found to present a better appearance, it will look cleaner and, unless, very chronic, will show signs of granulations at the margin.—*Correspondenz Blatt f. Schweitzer Aerzte.*

BRANCHIAL FISTULA CURED BY EXCISION.

G. Cavazzani relates (*Rif. Med.*, October 7th, 1891) a case of congenital fistula of the neck which he cured by excision. The patient was a girl, aged 13, who came under his care at the end of November, 1888. She had, just internally to the sternal insertion of the sterno-mastoid of the right side, a tiny pimple, which was said to become larger from time to time and to burst, giving issue to a discharge usually mucus, but occasionally milky, and sometimes containing fragments of food. The discharge generally continued for a few days and then ceased, when the opening closed and a pimple gradually formed over it as before. A small cord could be felt running upwards in the neck from the aperture to the right cornu of the hyoid bone, where it was lost. By a little manipulation it was possible to pass a slender probe along the fistula into the pharynx, where it could be seen at the edge of the posterior pillar of the fauces beside the tonsil. On December 21st the patient was placed under chloroform, and the strictest antiseptic precautions being used, two very small semi-elliptical incisions were made, enclosing the aperture of the fistula in the neck. The cervical end of the fistula was next drawn out and its walls isolated to as great a depth as possible. A probe was then introduced into the fistula, and the latter cut down upon by a vertical incision extending from the cornu of the hyoid bone downwards for two centimetres. The fistula was detached at the lower part, and drawn out of the wound with forceps. An attempt was then made to dissect it out towards the pharyngeal aperture. In the course of this proceeding, however, the lower end of the fistula was torn away. A small incision was therefore made around the pharyngeal opening, and the fistula was drawn into the

mouth, the stump being ligatured with a long thread, which was fastened to the patient's right ear. The small wound in the pharyngeal wall was closed with two points of suture; the edges of the upper part of the external wound were approximated, and a small drain tube was placed in the lower. The temperature was somewhat raised for a day or two, but no further complication occurred. The upper part of the wound in the neck healed by first intention, and the lower after suppurating a little during a few days closed firmly. The pharyngeal end of the fistula which had been ligatured came away entire on the third day without any trouble. The patient was discharged completely cured on January 16th, 1889.—*Brit. Med. Jour.*

TREATMENT OF HYPERTROPHIED TONSILS BY MEANS OF IGNIPUNCTURE.

Dr. Gilbert I. Cullen says in the *Cincinnatti Med. Journal* that the main indications for reduction of tonsils by galvano-cautery might be summarized as follows:

I. When tonsils have ceased to perform their function by reason of interstitial thickening and occlusion of the lacunæ of the glands, in which condition the mouths of the crypts becoming blocked with the accumulation of sebaceous matter, which rapidly decomposes, they form an excellent culture medium for various pathogenic germs which may ultimately be absorbed into the lymphatic system.

II. That when a tonsil shows itself competent at short intervals to become inflamed and give rise to peritonsillar abscess.

III. Where the tonsil is so situated that it is a matter of great difficulty as well as danger to use the tonsillotome, and from extensive adhesion of the pillars, likely to cause severe hæmorrhage by their being cut.

IV. In all cases where the patient is of a hæmorrhagic diathesis or in other cases in which alarming hæmorrhage is feared.

V. Where patients will not consent to the use of the knife and yet the demand for the removal of the gland is imperative.

DRESSINGS USED IN BILLROTH'S CLINIQUE.

1. Iodoform gauze: this is first sterilized, and then it is soaked in the following mixture—Iodoform, 50 grains; glycerine, 100; alcohol, 400; then squeezed and dried with sterilized cloth.

2. Klebende iodoform gauze (colophonium used in its preparation).

3. Tannin iodoform gauze.

Silk: This is almost the only thing used for sutures, etc. It is disinfected as follows: Boiled in 5 per cent. carbolic lotion for an hour, then wrung out with disinfected hands, and boiled for another hour in 5 per cent. carbolic, then left for 14 days in carbolic lotion, when it is ready to be used.

Cat-gut: First washed with *potash* soap, then laid twice for 12 hours in ethylic ether; then dried and sterilized in a dry chamber by raising the temperature to 120 degrees C., then laid in 1 to 1,000 sublimate for 24 hours, and finally kept for use in *absolute* alcohol.

Instruments before the laparotomy to be boiled for one hour in 5 per cent. carbolic lotion.

Silk, cat-gut, and instruments during the operation placed in 2½ per cent. carbolic lotion, not in 5 per cent., as was previously done.

Needles, clamps, saws, lie always in 15 per cent. carbolic glycerin.

Hypodermic needles and syringes kept in 15 per cent. carbolic oil.

Drains kept at least 14 days in carbolic lotion before use, and always remain therein.

Sponges not used, hydrophile gauze being employed instead. Pieces are folded (10 fold), sterilized in the hot oven, and then boiled for one hour in carbolic lotion, 5 per cent.; then kept in carbolic acid or in sublimate, 10 per cent., and just before the operation placed in 1 to 3,000 of a sublimate solution.

During the operation the wound is washed in a 1 to 3,000–5,000 sublimate solution, which is also used for the hands, tartaric acid being added to lotion as well as fuchsin to color it.—*Med. Press.*

CHLORPHENOL—A VOLATILE ANTISEPTIC.

This is another effort directed to destroy the tubercular microbe which Dr. Passerini has proved to be a success! The same experimenter has long endeavored to modify the *Trichlorphenol*, but the odor and irritation to the mucous membrane is always a serious objection to its use. Dr. Tacchini, of Pavia, has now obtained a preparation of *Chlorphenol* which has as much antiseptic power as trichlorphenol, and is free of all the objections against the latter. Chlorphenol is a very volatile fluid, whose vapor is heavier than air. When applied to

wounds, ulcers, and discharging glands the improvement is marked.

Ozæna, laryngitis, bronchitis, and more particularly tubercular affections are beneficially affected. Passerini has treated five of the latter cases with the vapor, which being heavier than air, presumably reaches the bronchioles if not the alveoli of the lung itself, and he finds that the bacilli rapidly disappear after commencing the inhalations. All the five cases have quite recovered, varying from two to six months from beginning of the treatment, and are apparently well at the present time.

The claims put forth are:

1. The inhalation of chlorphenol is easily borne in advanced phthisis, and is convenient in application.

2. No injurious effects arise from its continuous use.

3. Changes in the quality and quantity of expectoration till pus and bacilli disappear; cough is diminished; fever is reduced; appetite and sleep soon return; the weight of the body increases rapidly and the local improvement is speedily performed.

Hence the three conditions, applicability, innocuity, and efficacy are the dominant recommendations of the drug.—*Med. Press.*

GYNÆCOLOGY.

UTERINE FIBROIDS: HYSTERECTOMY OR ENUCLEATION?

Dr. Chevrier (*Nouvelles Arch. d'Obstét. et de Gynéc.*, July, 1891) writes on the advantages of enucleation of fibro-myomata through the abdomen over supravaginal hysterectomy. He bases his observations on cases observed in Professor Doléris's wards. Hysterectomy will, he thinks, long be practiced, being the only known resource against slow-growing, painless tumors where no hæmorrhages occur. Early diagnosis will lessen the indications for hysterectomy; but this will not greatly increase the indications for enucleation, for very early diagnosis needs great skill and experience, and then the symptoms are as yet so mild that active surgical steps of any kind are hardly justifiable. Bulky hyperplastic and cystic fibromata fused to the uterine muscular tissue usually demand hysterectomy. Enucleation through an abdominal incision is preferable in small or median submucus or interstitial fibromata. The mortality is about 16 per cent.; recurrence occurs in 2 per cent. of the cases. The advantages of enucleation over the more radical operation are distinct. Enucleation saves the woman from a series of harrassing and painful phenomena, often protracted. It diminishes the chances of immediate dangers, such as sepsis and hæmorrhage and distant complications like hernia and fistula. Lastly, it leaves to the patient her reproductive functions unimpaired.—*Brit. Med. Jour.*

THE TREATMENT OF PELVIC SUPPURATION AND INFLAMMATORY LESIONS OF THE APPENDAGES BY VAGINAL HYSTERECTOMY.

Pozzi (*Gaz. Heb. Med. Chir.*) felt a distrust of M. Péan's method at the outset, because it seemed not to be founded upon true physiological principles. Realizing, however, that empiricism sometimes leads to valuable results, he put aside prejudice and carefully followed the discussion upon the subject, studied the published reports, witnessed Ségond's opèration, and twice performed it successfully himself. His opinion is unaltered; he considers hysterectomy inferior to laparotomy in the treatment of pyo-salpinx. He believes, moreover, that its use will lead to mischievous practice in the surgical treatment of diseased appendages.

M. Ségond's paper is entitled "Treatment of Pelvic Suppuration by Vaginal Hysterectomy," but both he and Péan in actual practice apply the operation to *all inflammatory lesions* of the ovaries and tubes. How could it be otherwise when by clinical examination it is so often impossible to diagnose between pyo-salpinx, hemato-salpinx, hydro-salpinx, parenchymatous salpingitis, polycystic degeneration of the ovary, and a small cyst of the broad ligament?

The question is really this: Is vaginal hysterectomy preferable to laparotomy in the treatment of inflammatory lesions of the appendages, whether suppurative or not?

The three principal arguments adduced in its favor are: (1) greater efficacy; (2) lessened danger; (3) absence of cicatrix.

As to the first, it is not to be denied that this indirect method gives good results, but are they better or even so good as those obtained by direct removal of the diseased organs?

(*a*) *Efficacy of hysterectomy for pyo-salpinx and pelvic abscess.*—These cases may be subdivided into those where—

1. The sac is free.

2. Sac is adherent, but can be enucleated (with or without fistulæ).

3. Sac adherent; cannot be enucleatad; fistulæ present or absent (true pelvic abscess).

In the first and second cases, laparotomy would permit a complete removal of the diseased parts. By hysterectomy even the slightest adherent or perfectly free sacs cannot always be removed, and pathological tissues are necessarily left in the pelvis, where, to be sure, they may be absorbed or tolerated, but where there is a good chance of their causing immediate or subsequent infection. These cases are by far the most frequent in occurrence.

A few cases there are, to be sure, of pelvic abscess where extirpation of the sac is an impossibility even by laparotomy, but these are rare. The author found three out of thirty-nine cases, and Bouilly three out of thirty, making a proportion of one in ten. These patients were completely cured after laparotomy, cleansing of the cavity, washing, and insertion of a tampon of iodoform gauze according to Mikuliez's method, which proves that even difficult cases may be cured by laparotomy.

Much stress has been laid upon the incurable lesions resulting from fistulous openings, transforming the pelvic floor into a "purulent sponge," which is an exaggerated figure of speech. Open fistulæ, whether in the rectum, vagina, or abdomen, are assuredly a complication, but less grave than might at first be supposed. They invariably close after a laparotomy, provided that the diseased parts are removed, or the cavity thoroughly cleaned and antiseptically tamponed. Iodoform gauze forms a perfect medium of capillary drainage. Any fistulæ persisting after such treatment can only be old fistulæ from incomplete operation, or of recent formation from infected sutures.

Hysterectomy certainly permits of free drainage. Pozzi gives it credit for this, and considers it valuable as a *secondary* resource, should laparotomy be incomplete.

(*b*) *Efficacy of hysterectomy for non-purulent inflammatory lesions of the appendages.*—So many lesions of the tubes and ovaries may simulate suppuration of the tubes that this operation is most likely to be widely applied, if used at all. The dangers of its general use are manifold, the principal ones being removal of the uterus of a patient in whom the appendages of one side only are affected beyond help, and leaving in place diseased ovaries or tubes adherent to the pelvic walls. The advocates of the method claim that it is undertaken only when the lesion is bilateral; but errors of diagnosis are too easy to make this precaution very valuable. Both sides may apparently be affected, but in reality only one be seriously diseased, the tumefaction of the other being caused by a small cyst of the broad ligament, or serous infiltration due to catarrhal salpingitis. As to the after-results of ovariotomy, pain rarely persists, except when the organs removed are but slightly diseased, and even then often disappears ultimately. Metritis may exist for a while, but usually ceases because of the uterine atrophy following removal of the ovaries. Curetting will remedy this trouble in any case, and its severity and importance have been greatly exaggerated. The relative *gravity* of the two operations is the most important point in the discussion, as well as the most difficult to decide.

From a theoretical point of view even, the author gives the preference to laparotomy. In those cases where the uterus is immovable, the abdominal opening gives free access to the diseased parts, and touch can supplement sight. The vaginal opening necessitates groping at the end of a deep and narrow cavity, hemostasis depends upon a lucky application of the forceps, and the lesions, if too high or too far forward, may be inaccessible.

The statistics so far obtained are also in favor of laparotomy. Bouilly and Ségond are of equal rank as surgeons. The first, out of thirty-three laparotomies for *pyo-salpinx*, had four deaths; the second, out of twenty-three hysterectomies for *pyo-salpinx* and *other tubal lesions*, had four deaths.

Pozzi himself, from February 1st, 1889, to March 10th, 1891, operated upon thirty-nine cases of pyo-salpinx and pelvic abscess, several of them being cases of the "purulent pelvic sponge" spoken of by Messrs. Ségond and Réclus as species of *noli me tangere*. There were in all three deaths, thirty-six complete cures. This list in itself shows better proportionate results than the list of hysterectomies: he further strengthens it by the addition of cases operated upon, during the same period of time, for non-suppurative lesions of the tubes and ovaries, which is as follows:

Parenchymatous salpingitis	19
Hydro-salpinx	3
Hemato-salpinx	3
Sclerocystic ovaritis	12

This he supplements by eight cases operated upon during the previous month: three of pyo-salpinx; two of hæmato-salpinx, of which one was complicated by suppuration and the other by an enormous hæma-

tocele; two of large polycystic ovaritis, and one sclerocystic ovaritis. All the cases but one were followed by cure; this one was hæmato-salpinx consecutive to tubal pregnancy and complicated by hæmatocele. The uterus was friable, and the operation had to be terminated by abdominal hysterectomy.

The total result, then, is eighty-four operations: eighty cures, four deaths. Hysterectomy has no such results to show, and, while its list of cures is on the increase, science must consider acquired results rather than results hoped for.

Hysterectomy presupposes infallibility of diagnosis. The first incision causes sterility. Laparotomy, on the other hand, permits of a rectification of an error of diagnosis before any decided step has been taken. As to the third argument, the absence of deforming cicatrix, it will have less weight with surgeons than with their patients, and it has been much exaggerated. The incision is rarely larger than two and one-half to three and one-half inches, and never larger than four and one-half. Moreover, a suture in layers will reduce the abdominal cicatrix to a mere line, and give it sufficient strength to obviate all necessity for wearing a belt.

TREATMENT OF PELVIC EXUDATES.

Fritch, in the *Gazetta degli Ospitalia*, No. 47, advises the immediate evacuation of the abscesses through the vagina, he then is in the habit of suturing the wall of the abscess to the vaginal wall in order to avoid infiltration of the cellular tissue, after having made an injection into the cavity of the abscess. He uses neither packing with iodoform gauze nor drainage; he recommends, instead, frequent injections. He has found streptococci in the majority of the abscesses.

OBSTETRICS.

KNOTS IN THE UMBILICAL CORD.

Dr. Lyncker (*Deut. med. Zeit.*, No. 57, 1891) has observed three cases where a true knot was found in the cord, the child in each case being alive. He believes that the knot is formed by the fœtus shaking about in the liquor amnii and slipping through a loop in the cord accidently formed by its own evolutions. In 100 births it is rare to detect more than 1 case of true knotted cord. This curious condition appears to have no influence on the child's development; probably there is not sufficient force at hand to pull the cord tightly enough to cause obstruction of its vessels.—*Brit. Med. Jour.*

ANTIPYRIN AS AN ANTIGALACTAGOGUE.

Le Practician states that M. H. Guibert, interne at the encouchment clinic of Professor Grinfelt, at Montpellier, has fully confirmed the value of antipyrin as an antigalactagogue. M. Guibert administered antipyrin in doses of 25 cgm., repeated up to 2 gm. daily, the patient taking a dose every two hours, the interval being somewhat longer after the two principal meals of the day. The lacteal secretion was completely suppressed at the end of a time varying from two to six days, and this too, without changing a single detail of alimentation, even of those newly accouched. No accidents have supervened, although some of the patient's had taken as high as 14 and even 16 gms. in the course of five or six days. M. Guibert concludes from these observations (nineteen in number) that antipyrin renders real service in those cases where it is desirable to suppress the secretion of milk, and that the medication is harmless.

CURE OF ECLAMPSIA BY LARGE DOSES OF CALOMEL.

Dr. Josef Smits (*Der Frauenarzt*, September, 1891) publishes clinical notes of a very severe case of convulsions coming on in the ninth month of pregnancy. The patient was 19 and well nourished. Anasarca was very marked; the urine was albuminous and full of casts. After severe headache and vomiting violent convulsions set in, followed by coma and stertorous breathing. No labor pains had occurred. A quantity of urine was drawn off. The skin was dry, and though the patient was wrapped in warm, moist sheets, diaphoresis did not take place. Dr. Smits feared to give pilocarpin, as Bricon had recently noted unfavorable results under the circumstances. Chloroform and morphine were both considered inadvisable; the heart's action was irregular; the pulse slow, small in volume, and very compressible; and the pupils were contracted. Dr. Smits determined to counteract the uræmic symptoms by free purgation. This occurred after "heroic" doses of calomel (400 milligrammes, or over 61 grains). Thin stools began to pass, and at the same time the convulsions began to be weaker and less frequent. After twenty motions, in which uric acid crystals could be distinguished with the

microscope, the fits ceased altogether, and the sensorium became clearer; but the skin would not act, and the œdema continued. Dr. Smits feared to induce labor, least the eclampsia should return. On the sixth day after the fits had ceased the patient gave birth to a macerated fœtus. The perineum was slightly ruptured. No fits occurred after delivery, and by the sixth day the œdema had disappeared. The specific gravity of the urine fell during the severe attacks from 1032 to 1012.—*Brit. Med. Jour.*

PÆDIATRICS.

IODOFORM AS A PROPHYLACTIC OF OPHTHALMIA NEONATORUM.

Valude (*Ann. d' Oculistique*, August, 1891) publishes results obtained in the clinics of Dr. Bar and Professor Tarnier in Paris by the systematic application of finely powdered iodoform to the eyes of newly-born infants. The figures compare favorably with those obtained in the same wards and under similar conditions by Crédé's treatment by nitrate of silver. Valude thinks that iodoform will prove more useful than nitrate of silver in the hands of midwives, because it is more easily applied and does not decompose in the way that solutions of the silver salt do when kept for any length of time, in spite of precautions such as dark glass bottles, etc. He recommends that immediately the child is born, and before the cord has been divided, the eyelids should be carefully cleansed, and powdered iodoform dusted into the conjunctival sac. One advantage claimed is that the powder, or some of it at least, remains in the folds of the conjunctiva for a considerable time after its application, whereas solutions of all kinds at once drain away.—*Brit. Med. Jour.*

INFANTILE PALSIES OF OBSTETRIC ORIGIN.

Dauchez (*Annales de Gynécologie*, September, 1891) has contributed the first part of an article on the subject of infantile palsies of obstetric origin. This paper is devoted to a classification of the forms of paralysis, both as to their origin and as to the nerve-trunks which are affected.

The writer distinguishes between spontaneous and traumatic palsies. The former are those produced, first, by pressure in contracted pelves; second, by the effects of face-presentation; third, during protracted labors. The discussion of palsies of traumatic origin is reserved for the latter half of the paper. The termination of spontaneous palsies in sixteen cases observed by the writer is noted as follows:

Recovery in	9 cases.
Persistence of loss of power in	3 "
Death in	2 "
Result not observed in	2 "

This form of paralysis appears, often to the astonishment of the accoucheur, after a spontaneous labor. It is sometimes apparent after a labor in which the face has presented with the neck forcibly extended, or in which a nerve-trunk has been compressed by a loop of the cord. In writing of these spontaneous palsies the author devotes his attention principally to the peripheral origin of the lesions. For instance, in alluding to facial paralysis, he asserts that the simple inclination of the vertex is sufficient to produce this form, often attributed to pressure of the head against the walls of a contracted pelvis.

He classifies the order in which the lesions occur as follows: Facial paralysis, either peripheral, central or cortical.

Paralysis of the brachial plexus and of the circumflex nerve, resulting either from pressure during prolonged labor, or, in the first case, from forcible extension of the neck in face-presentations.

Paralysis of the inferior extremities, arising from efforts at traction by means of the blunt hook, etc., in breech-presentations, or from compression exerted by the cord tightly wound about one of the extremities.

The list of cases presented offers a very interesting summary of the results of these various forms of paralysis. Case No. 10 is especially interesting, inasmuch as the cause and the effect are both of unusual occurrence. The description of this case is taken from an article by Roulland. It refers to an infant, born with the vertex presenting in the L. O. A. position, and whose neck was tightly compressed by the cord. On the second day complete paralysis of both upper extremities was noticed; the lower extremities were not implicated, illustrating clearly an instance of paralysis due to compression of the cord pure and simple.—*Univ. Med. Mag.*

HYGIENE.

MICROBES AND CARPETS.

In our endeavor to be comfortable in this vale of tears, there is a tendency to overlook the elementary laws of hygiene, and in no respect, perhaps, more so than in the superabundance of curtains and carpets—these

non-patented contrivances for hindering the free circulation of fresh air and for stultifying Nature's automatic arrangements for the deodorization and disinfection of our homes. Carpets are always objectionable when they are not designed to permit of easy removal for cleansing purposes without the necessity of turning a room topsy-turvy. In most houses the carpet only comes up once a year, by which time it is as full of microbes and accumulated filth as its interstices will allow. No wonder, then, if our rooms preserve a musty smell in spite of periodical opening of windows and vigorous sweepings, which only displace a portion of the dust to settle promptly elsewhere in some less accessible spot. Fixed carpets are even more objectionable and unwholesome in bed rooms, for there they absorb the fœtid emanations of the night, and soak up various decomposable materials for future use. The ideal would be a polished wooden floor garnished with rugs in sufficient number to give an aspect and feeling of comfort, while admitting of easy exposure to the salutary influence of air and light. Rugs, carpets, and curtains ought to be frequently shaken and hung up in the fresh air if they are to remain sweet, not once a month or year, but twice or thrice a week, if not oftener. At this price only can we hope to deprive confined spaces of their native unwholesomeness, and the sooner housewives lay this maxim to their hearts and act upon it, the better.—*Hospital Gazette.*

GLYCOSURIA DUE TO FOOD SUBSTANCES.

In a paper read before the Academy of Medicine of Rome, March 22nd, 1891, M. Colasanti discussed the question whether in cases of circulatory disturbances of the liver, especially in cirrhosis, the elimination of saccharine substances takes place by way of the kidneys. The divergence of opinion on this point has led him to again investigate the action of carbohydrates in cases of cirrhosis of the liver. After numerous examinations continued for a time he was able to demonstrate that the sugars are not excreted by the kidneys, but occur in the serous exudations in the pleural and abdominal cavities.—*Deutsche Medizinal Zeitung.*

DRINKING WATER AND ENTERIC FEVER.

Legrain (*Ann. de la Policlin. de Paris*, October, 1891) says that the problem of the origin and propagation of enteric fever is probably solved by the discovery of Eberth's bacillus and by the finding of this micro-organism in the water suspected of conveying the disease. Three theories have been put forward (1) autotyphisation—and the identity of the B. coli communis with Eberth's bacillus lent some strength to this idea—(2) direct contagion, and (3) the presence of the germ in external media, especially in water, and its transmission in that way. This latter is the most generally accepted theory. Brouardel in 1887 admitted that though the disease could be propagated by water, air, the patient's linen, or the hands of those looking after him, yet in 99 out of 100 cases it was through the medium of water. The author then gives the details of an epidemic occurring in a home for idiots and the weak-minded. After describing the insanitary condition of the river, M. Legrain draws attention to the increasing prevalence of gastro-intestinal affections in the home. Thus among an average of 170 treated yearly, there were 25 such cases in 1887, 57 in 1889, and 84 in 1890, the epidemic taking place from January to May of that year. Two conclusions are drawn (1) that the highest figure representing the gastro-intestinal disturbance and that representing enteric fever corresponded, and (2) that the epidemic was the climax of a preparatory period of gastro-intestinal disorders. The author agrees with Chantemesse that gastric disturbance with fever, apart from simple indigestion, may be abortive enteric fever. Thus the epidemic was the progressive and (at length) momentary aggravation of an evil increasing from day to day. This is borne out not only by the prevalence of gastro-intestinal catarrh and its steady increase, but also by the sporadic cases of enteric fever in the community and the occurrence of cases of gastric disturbance clearly infective, such, for instance, as happened in one newly arrived and which disappeared with the discontinued use of the water. Occurrences suggesting direct contagion were few. Most attacked had drunk the water straight from the river. Again nine individuals who had also drank the water were seized with diarrhœa. The river water was the first if not the only source of the disease. Outside the home there were cases of gastric disturbance with diarrhœa, fever, and enlarged spleen. The epidemic lasted long, as if the cause was quasi-permanent. It hardly affected the other part of the institution situated at a little distance from the first-named home, for the inmates drank water which had at least been filtered. The most robust boys were mostly attacked because they worked in the fields near the

river, and thus the water was directly accessible to them. When the weaker ones suffered, it must have been through the medium of the table water. They would no doubt be less resistant that the stronger.—*Brit. Med. Jour.*

MEDICAL CHEMISTRY.

GALLACETOPHENON.

Pyrogallol, or pyrogallic acid, much used in the treatment of psoriasis, having been found to produce grave disturbances (sometimes mortal) with great ease, dermatologists have of late largely renounced its employment. These facts led Nencki to experimentation with pyrogallol, and he found that by replacement of the three hydroxyl molecules with methylketon he obtained a comparatively harmless compound, to which he has given the name gallacetophenon. It is obtained as a yellow powder, soluble in hot water, alcohol, ether, and glycerin. It is sparingly soluble in cold water, but its solubility is greatly increased in the presence of sodium acetate. The following is recommended as a formula for a hot solution, which does not deposit on cooling:

℞

Gallacetophenon	parts iv.
Sodium acetate	" xxx.
Hot water	" c.

This substance, according to Von Ino and others, has greater efficacy in psoriasis and other parasitic skin diseases than pyrogallol, and does not have any of the inconveniences of the latter, not even staining the clothing of the patient.

DETECTION OF QUININE IN THE PRESENCE OF PHENACETIN.

Sestini and Campani, in the *Pharmaceutische Zeitung* (quoted by *American Journal of Pharmacy*), state that phenacetin prevents the fluorescence of quinine sulphate, especially in dilute solutions; with chlorine water and ammonia phenacetin produces a yellowish-violet coloration, a mixture of quinine and phenacetin with these reagents produces a fine blue color. To obtain the thalleioquin test, best results are obtained with bromine vapor. Bromine vapor is allowed to act upon the solution until a faint turbidity results, then ammonia is added, drop by drop; proceeding in this manner, the green coloration appears, although darker and inclined towards a violet; if the test be now agitated with ether and allowed to stand awhile, the ethereal layer will be colored yellowish-violet and the aqueous layer green.

PENTAL, OR TRIMETHYL-ETHYLENE.

Another anæsthetic has made its appearance, viz., "pental." This is the name given by Dr. von Mering, of Halle—who had also introduced the hypnotic amylene hydrate, $(CH_3)_3COH$, into therapeutic practice—to a new derivative of amylene, viz., the trimethyl-ethylene: $(CH_3)_2.C:CH.CH_3$. It is to be regretted that a commercial name has been coined for this; or at least that no better name than "pental" has been chosen, for the presence of 5 carbon atoms should not have been taken as a characteristic feature.

According to present reports, pental is safe anæsthetic, and acts promptly, only about 20 c.c. of it being required to produce anæsthesia, which supervenes generally after four or five minutes. Insensibility is neither very deep nor very long, but it is sufficient to permit, under its influence, the performance of minor operations, such as extraction of teeth, etc. In most cases insensibility to pain appears before complete unconsciousness. Pental in said not to produce any disagreeable after-effects, and no untoward symptoms during its use.

Trimethyl-ethylene boils, according to E. Schmidt, at 35° C. (95° F.); according to Le Bel, at 36°–38° C. (96.8°–100.4° F.). Its spec. grav., according to R. Schiff, is 0.6783 at 0° C. (32° F.), and 0.6353 at 36.8° C. (98.3 F.).

NEWS AND MISCELLANY.

PITTING OF SMALL-POX.

The pitting of small-pox has been entirely prevented by Dr. Lewintaner, of Constantinople (*Wien. Klin. Woch.*) by antiseptic treatment as follows: The entire head and face, except eyes, and the neck are covered with plaster consisting of three parts carbolic acid and fifty parts each of olive oil and starch. The body is covered over with a mixture of three parts salicylic acid, thirty parts starch, and seventy parts olive oil. The internal treatment consists in giving quinine in acid solution.

OREGON OPIUM LAW.

From the *Pacific Drug Review* of October we publish the following synopsis of a law passed in 1887 which relates to the sale of

opium, morphine, eng-she or cooked opium, hydrate of chloral or cocaine. In the publication referred to the law is printed in full. No persons can have in their possession or offer for sale either of the above articles unless they have a license from the county clerk of the county in which they reside. The license is good for one year and costs $1. Such licenses can only be granted to regularly qualified physicians and druggists. The party selling must only deliver the quantity ordered in the prescription. These articles can only be prescribed for medicinal use, and in such quantities as are recognized by proper medical authorities as suitable. A record must be kept and this be open for public inspection. The punishment for violation of the law is from $50 to $250 fine, or 30 to 90 days imprisonment, or both.

THE GOOD OLD REMEDY.

When everything goes wrong, boys,
When you're sick or tired.
When you visit your best girl,
And by her pa get fired,
There's nothing in the world, boys,
Will bring you such relief.
As a real good hearty laugh, boys,
'Twill soon allay your grief.
So for each pain what e'er the cause,
Just try the laughing plan.
Laughter's an institution, boys,
Then let's laugh all we can.

Let preachers rate frivolity,
We very well do know
The greatest prosers use it,
But oppose it just for show;
They find it such a help, boys,
As all poor sinners do,
And they need its consolation, boys,
As much as I or you.
Of all the remedies on earth
Within the reach of man,
Laughter's the best and cheapest, boys,
Then let's laugh all we can.

Pharmaceutical Era.

FOR THE CURE OF SNAKE-BITE.

Dinshah Ardeshir Taleyarkhan, the municipal commissioner of Baroda, India, has published a pamphlet in which he offers some suggestions concerning the cure of snake-bite by means of inoculations of the blood-serum of immune animals. The common weasel is, he says, proof against snake-bites, and it will attack and kill any snake that it may come across, never suffering in the slightest from the serpent venom. He suggests therefore that the blood-serum of this weasel (or mongoose) be injected in case of snake-bite, and believes that experience will show that this is an effective antidote against the poison.

ALLOY IMITATING GOLD.

An alloy closely imitating gold has been discovered by Held (*Chem. Centralbl.*) It is formed by fusing copper, heating it to a certain temperature, and combining it with six parts of antimony; when the latter has also melted, magnesium, calc-spar and charcoal ashes are added. This compound is not oxidized by ammoniacal or acid vapors, and does not lose its color. It can be rolled, hammered and soldered like the genuine metal, but it is harder.

FATAL ELECTRICAL CURRENTS.

Prof. Elihu Thomson finds in his experiments on the physiological effects of alternate currents that the danger of the current diminishes as the number of alternations per second is increased. Thus it took twenty times as strong a current to kill a dog when the alternations were 4,500 per second than when they were 120 per second. When the alternations were 300 per second, the current was only half as dangerous to life as when the alternations were 120.

ARE HOSPITALS NUISANCES NECESSARILY?

There seems to be a growing tendency to regard Hospitals as nuisances, or at least as undesirable neighbors. The Trustees of the Free Hospital for Women not long ago purchased a lot of land in Brookline, with the intention of building a Hospital to be devoted entirely to gynæcological work. It would seem as if such a building could hardly affect the value of adjacent real estate very unfavorably, but apparently the owners of land and houses in the neighborhood thought otherwise. Some of the objections urged against the granting of a permission to build were unique, others far-fetched and absurd, but they seem to have had weight with the selectmen of the town. The remonstrants forced the friends of the Hospitals to admit that when patients were re-

covering from ether, there was sometimes more or less screaming, and that in warm weather it might be necessary to leave the windows open at that time. The counsel of one of the objectors remarked that the erection of such a Hospital would certainly be a detriment to his client's home. There is a prejudice against hospitals, and when it is known that it is a charity hospital the prejudice is still stronger. Another important point is its influence on school-children. They will imagine a great many things, and it is just as bad to have their imagination aroused as it is to see the very worst of sights.

This surely is carrying even sentimental objections pretty far, but the real state of the case seemed to be that such an institution is a hindrance to suburban land that is being "improved for residential purposes."

A somewhat similar case occurred in Winthrop some months ago, except that in this case the hospital had already been built, and had been doing good work for a number of years, and the private houses had grown up around it. Since 1878 the Sea Shore Home had received during the summer months a large number of infants suffering from intestinal diseases, with their mothers. The number of children treated by the institution had amounted to 2,483. Within a few years extensive additions had been made to the buildings. Last winter the citizens of the town, at the annual town meeting voted that the institution was a nuisance and that a renewed occupancy of the buildings would be opposed with the assistance of a legal injunction. With this evident intention to make the position an undesirable one, the managers felt that it would be best to remain inactive during the present season, not yielding their position, but retaining the right to carry on a home for sick children when the proper time comes.

Is it well that the unselfish efforts of those who are devoting time and money and skill to the amelioration of the lot of the unfortunate and impecunious sick should be hampered by the opposition of this narrow, selfish character?—*Boston Med. Surg. Jour.*

FRENCH LAWS REGARDING PROFESSIONAL SECRECY.

In France, the laws regarding the abuse of professional secrecy, the secrets between a physician and his patient, the pharmacist and the physician or the patient, are very severe, and enforced with great vigor and impartiality. The prefect of police is the officer who usually is the complainant in criminal proceedings against violators of these laws. A great commotion has recently been caused at Lyons by the discovery of the fact that the prefect of police had been the direct cause of what might be called a wholesale violation of the statutes. It appears that this officer had recently sold a lot of old paper, among which was a bundle of physicians' reports relative to deaths occurring in the city for twenty years past. These reports gave the name, residences, etc., of the deceased, the nature of the maladies, and other information forbidden to be made public. The papers had been sold by the purchaser to grocers, spicers, and other retailers, as wrapping paper, and were thus as widely distributed as possible in the community. Upon bringing the matter to the notice of the officials, the latter could only offer excuses and promise not to let such an accident happen again.

STAMPING OUT SMALL-POX.

Dr. J. M. Boyles, City Health Officer of Houston, Tex., relates in the *Abstract of Sanitary Report*, of January 26, 1891, an instructive history of an epidemic of small-pox in that city. On December 4, 1890, a circus arrived in Houston with a case of small-pox which was kept concealed until after the circus had left several days. On December 21st, small-pox made its appearance in several parts of the city simultaneously—in hotels, boarding-houses, etc. In less than five days there were 41 cases, mostly white. How many persons had been exposed at this time could not be estimated. At the suggestion of the Health Officer the City Council made vaccination compulsory. The house-to-house plan was adopted. Of the 21,000 persons vaccinated there was no bad effects—no amputations or deaths. Some suffered several weeks with sore arms. In forty days Dr. Boyles succeeded in getting the disease under control. Of the 359 cases no one contracted the disease that had been vaccinated under eleven years. Some vaccinated forty-nine years ago had varioloid, but of such a mild type it was not necessary to go to bed. There were 120 in the quarantine hospital that had been vaccinated and were exposed who did not take the disease.

THE PRICES OF QUININE FOR SIXTY-NINE YEARS.

The *Oil, Paint and Drug Reporter* has recently published the following table of the highest and lowest prices at which quinine has been quoted during each year since and including 1823. The prices given in the latter portion of the table are for foreign quinine in bulk:

PRICE PER OUNCE.

	Highest.	Lowest.		Highest.	Lowest.
1823	$20.00	$16.00	1858	$1.40	$1.25
1824	14.00	12.00	1859	1.50	1.25
1825	8.00	8.00	1860	1.80	1.20
1826	7.00	5.25	1861	2.10	1.80
1827	7.50	6.00	1862	2.90	2.25
1828	6.00	3.25	1863	3.25	2.70
1829	2.90	2.25	1864	3.75	2.60
1830	2.50	1.75	1865	2.40	2.20
1831	1.50	1.35	1866	2.60	2.35
1832	2.00	1.75	1867	2.20	1.95
1833	1.87	1.70	1868	2.35	1.90
1834	1.80	1.25	1869	2.30	2.00
1835	1.65	1.60	1870	3.30	2.10
1836	1.58	1.45	1871	2.45	2.20
1837	1.40	1.40	1872	2.45	2.40
1838	1.90	1.60	1873	2.55	2.45
1839	3.30	2.75	1874	2.50	2.20
1840	3.12	2.87	1875	2.30	2.15
1841	2.62	2.50	1876	2.70	2.20
1842	2.00	1.60	1877	4.50	2.70
1843	1.80	1.55	1878	3.60	3.40
1844	3.00	2.00	1879	3.60	2.60
1845	2.40	2.35	1880	3.25	2.25
1846	2.40	2.20	1881	3.25	1.90
1847	2.40	2.30	1882	2.50	1.80
1848	2.70	2.60	1883	1.80	1.60
1849	3.65	2.95	1884	1.80	90
1850	3.70	3.70	1885	1.05	75
1851	3.25	3.25	1886	80	65
1852	3.00	2.70	1887	70	46
1853	3.20	2.70	1888	50	30
1854	2.50	2.60	1889	30	22½
1855	3.00	2.00	1890	32	23½
1856	2.60	2.40	1891	24	18½
1857	2.00	140			

From some explanatory comments made on this table by our contemporary we take the following:

"The marked decline observable in 1857 was largely attributable to the abolition of the 15 per cent. duty on cinchona barks. The rise in price from 1861 to 1866 was due, primarily, of course, to the changed conditions arising from the civil war, including increased consumption, diminished supplies due to the perils of navigation incidental to the war, and an increased cost arising from these combined causes, and from the imposition of a high rate of duty, ranging up to 45 per cent. for quinine itself, and 20 per cent. for the bark. The high range of prices continued to rule for some years, reaching the maximum of $4.50 per ounce in 1877, since which time there has been a gradual decline to the present low values of 19 cents for foreign bulk. At this juncture the influence of the East India barks began to be felt. In 1876 only 1,777 bales of this bark were imported into London, but the quantity rapidly increased to 6,260 in 1877, 13,460 in 1880, and 20,692 in 1881. In 1879 the alkaloid was also placed on the free list. It is this last downward movement that has caused tremendous losses, and in many cases ruin, to those who have maintained faith in the market price of the article. The large deals, the excitement, and final failures occurring when a price of $3 was predicted as the bottom figure in 1880 and thereabouts, will no doubt be vividly remembered by many members of the trade."

PHYSIOLOGY OF GASTRIC DIGESTION.

The foundations of our knowledge of the physiology of gastric digestion were undoubtedly laid by the careful study of the historical case of gastric fistula by Dr. Beaumont—the case of Alexis St. Martin. Animal experimentation and the test-tube reactions of the laboratory cannot be compared in accuracy to observations made directly upon the living human organism, when these rare opportunity arise which permit of such a study. Then, too, it may happen that a considerable rectification of current physiological doctrine has to be made, and the laboriously gathered results of many observers have to be replaced by those made upon a single case. Much depends, then, upon the skill and thoroughness with which the study of the processes in the human subject are undertaken. It must be admitted that these qualities are conspicuous in the recently published records of a study of the chemical processes of the small intestine by Drs. McFadden, Nencki, and Sieber. The subject of their researches was a female patient under the care of Prof. Kocher, in whom an intestinal fistula had resulted from excision of a portion of gangrenous intestine due to strangulated hernia. The false anus was situated in the ileum just above the ileocæcal valve, so that the materials escaping thereby were wholly composed of the chyme which had passed through the whole length

of the small intestine. For a period of nearly six months the woman lived under these conditions, permitting of a long series of observations relative to the time and character of intestinal digestion under varying forms of diet, etc. At the end of that time Prof. Kocher re-established the natural channel by means of an operation which proved perfectly successful. It may be remarked at once that during the whole period when there was practically no large intestine the patient gained in weight, and, as the urinary analysis showed, eliminated a fairly normal quantity of urea.

The procedure consisted in adapting a flexible tube to the fistulous outlet, so as to collect all the material that escaped, and to note its characters under varying circumstances. In consistency this "chyme"—if it may be so termed—was more fluid and diarrhœal when the diet was albuminous than when it was mainly of a vegetable nature. It was seen that the flow of chyme from the small into the large intestine is steadily continuous, being least marked during the night, owing to no food being then taken; and by some ingenious experiments (e. g., the addition of hard beans to the food, or of salol, which allowed of the detection of salicylic acid in the matters escaping) it was shown that the passage of foods from mouth to cæcum occupies at the least two hours; but all traces of the substances introduced did not disappear for from nine to fourteen or even twenty-three hours. The rate of flow, of course, bears much relation to the consistency of the intestinal contents. As regards the nature and properties of the evacuated materials, it is noticeable that they were almost free from odor, containing hardly any products of albuminous disintegration, such as indol and sulphuretted hydrogen; they were slightly acid in reaction, tinged yellow by bilirubin, and, according to the predominance of flesh or starchy matter in the food, showed muscle fibre, albuminous granules, vegetable fibres, starch granules, etc. and invariably a large number of various forms of bacteria. The filtrate yielded albumen, mucin, peptone, dextrose, the two forms of lactic acid, acetic acid, and the biliary acids and bilirubin. The authors enter very fully into the characters of the bacteria they find, many forms being special to the small intestine, others existing also in the mouth; but, passing over these, which would entail a full description to be intelligible, we may glance at the main results of their researches, which somewhat modify accepted physiological teachings. One point of interest is the fact that albumen is hardly, if at all, decomposed in the small intestine. Even the action of the tyrosin of the pancreatic juice is small, for leucin and tyrosin were not to be found. Probably, in health, albuminous disintegration takes place chiefly in the large intestine, and it is only in disease that it occurs in the stomach or small intestine. Amongst the products of such decomposition are iodol, skatol, phenol, sulphuretted hydrogen, carbonic acid, methylmercaptan, etc., all of which may be regained from the large intestine. The bacteria of the small intestine are concerned in the disintegration of the carbo-hydrates into lactic, acetic, and succinic acids, and also into ethylic alcohol. The authors, in noting this last-named fact, cannot avoid a thrust at the total abstainers. It is generally believed that the chyme is rendered alkaline by the secretion of the small intestine, but they find that, owing probably to the reinforcement of gastric acidity by the organic acid resulting from sugar, the total quantity of acid is more than can be neutralized by the bile, pancreatic, and intestinal juices. If, however, the alkalinity of these fluids be diminished, the intestinal contents are hyper-acid, and mucin is precipitated instead of being intermingled with the chyme. This explained the diarrhœal quality of the evacuations noted to be associated with a large amount of sugar and organic acid in the chyme. On the other hand, an excess of alkalinity favors putrefactive decomposition, the acids apparently holding in check the bacteria concerned in albuminous disintegration. A marked contrast in this respect was exhibited between the small and large intestine. Putrefactive bacteria could hardly be at all isolated from the former, whilst they abounded in the latter; but this is not owing to the influence of bile, which Nencki showed to have no real antiseptic property. The part played by bacteria in intestinal digestion is limited probably to the fermentation of sugar and carbo-hydrates generally, the excess of acid resulting from this fermentation being neutralized by the alkaline intestinal juice. But, much as bacterial life abounds in the intestinal canals, varying according to the kind and quality of the ingesta, it does not appear that the processes initiated by these organisms are of such value or importance in nutrition as the chemical ferments. Certainly the patient who was the subject of these observations gained in flesh, although for six months she was deprived of all the bacterial processes that go on in the large intestine.—*Lancet.*

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Clinical Lecture.

CHRONIC NEPHRITIS—CARCINOMA OF THE ŒSOPHAGUS—DIABETES MELLITUS.

BY FRANCIS DELAFIELD, M. D.,

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Gentlemen:—The first patient that I will present to you to-day, is a man 60 years of age, who has been in his ordinary health and able to do his usual work until within two or three months ago. During this very recent period, he has the symptoms of a constant dyspnœa which is made worse on exertion, and from time to time he has attacks of what he calls "smothering," that is, attacks of dyspnœa of a spasmodic character added to his constant dyspnœa. Besides this, he has a cough which is unattended by expectoration. He has lost his appetite as well as flesh and strength. He also has had some dropsy of the hands and feet, but this is now somewhat less marked than when he first came under our observation a couple of weeks ago. He looks poorly nourished, and has the physical signs of emphysema over both lungs. The heart is also somewhat enlarged. It works feebly, and has a murmur indicative of a mitral stenosis. The arteries are somewhat overfilled with blood and of high tension. His urine has a specific gravity of 1007 and contains albumen.

We have then in this man's case an illustration of an ordinary instance of disease of the lungs, the heart, and the kidneys, all of the same character and all examples of an inflammatory condition, and added to that, we get evidence of the contraction of the arteries, a condition which is often found associated with these pathological states, taken either separately or together. This man has had, first of all, a lesion for some time which gave him no subjective symptoms, and then he has had other conditions added to that which brought on this pathological train of symptoms. Now, to what part of this man's system are we to look for the original cause of his present troubles. To the kidneys our suspicions are at once directed, and we find this man had first of all a chronic nephritis. He has had this trouble for a considerable length of time, and yet, as so often happens, he has been able to do his ordinary work and was not conscious of the existence of any pathological lesion in these organs. But, probably, if his urine had been examined a year or so ago, it would have been then found to be of low specific gravity, though, perhaps, containing no albumen.

Now, the kidney lesion being the first to manifest itself in this man's case, what other pathological condition followed this one? The next lesion that followed that of the kidney was hypertrophy of the left ventricle of the heart, and that hypertrophy has probably existed for some time without giving rise to any other subjective symptoms. The patient did not in fact feel he was in any way unwell. What was the next lesion that came after this hypertrophy? Two or three months ago when he began to get suddenly worse, what pathological condition was it that caused him to feel so? It was brought about in this way: His heart became feeble, and contraction of the arteries developed at the same time, and with these two pathological factors, dyspnœa and dropsy developed, and he lost flesh and strength as a result. We know from clinical experience that patients may have disease of the kidneys and hypertrophy of the left ventricle, and yet be able to do their ordinary work, but not until these two last named pathological conditions are superadded, viz: feeble heart and arterial contraction, do they begin to feel sick and have to stop work. If you can get rid of this feeble heart action and of the contraction of the arteries, this man may be able

to return to his work for a time at least. It is, however, an easier matter to treat successfully either one of those conditions separately than both together. If a man has only contracted arteries, and the heart's action is all right, the problem is very much simplified, and, if he has feeble heart without arterial contraction the same holds true, but with a combination of feeble heart and contracted arteries, such as this man exhibits, then it becomes extremely uncertain whether we can relieve these conditions or not.

The first practical point that suggests itself to our minds in a case like this, is whether such a man should be kept quiet or given regulated exercises and allowed to go about. Taking this man, as he now presents himself to us, I should advise that he be kept in doors and not allowed to go about at all. Exercise would only tend to make him become worse. The next thing is to increase the force of his heart's action. To that end, he should be put on the use of iodide of potash, giving him ten grains of this drug four times a day, and with the relaxation of the arteries secured by this means, note the condition of the heart's action. It would be possible, if the heart's action were increased in force, that the arteries would continue to be contracted, and it would be also possible that if the arteries were dilated, the heart would continue to be feeble. Such a condition of affairs as that would mean that this man should have digitalis in addition to the iodide of potash.

In such a case as this, we can safely make a bad prognosis, for this man is not very apt to be relieved to any great extent by the therapeutic measures at our command. His heart and arteries are in such a bad condition that I do not think he will be able to go back to work, though he may get rid of his emphysema and dropsy; so long as he is allowed to remain quiet, he will feel comfortable enough.

CARCINOMA OF THE ŒSOPHAGUS.

The next patient I show you is a man 53 years of age, and a cabinet-maker by occupation. On January 5th, of this year, he noticed that he had some difficulty in swallowing solids, and this difficulty became gradually more intense, until finally he began to regurgitate his food.

He has lost since that time about 20 pounds in flesh, and, as you see, looks quite emaciated. His urine has a specific gravity of 1015 and contains no albumen. He complains of pain in the back and over the sternum when he attempts to swallow. I will now try the stomach pump in his case. As I pass the stomach pump down to a certain point in the œsophagus he experiences great discomfort when the tube reaches that point. This is not the discomfort that ordinarily attends the passage of a stomach tube, for when it has passed the pharynx, there is, generally, no more disagreeable feeling experienced on the part of the patient. As I withdraw the tube some mucus and blood regurgitates. This is the usual behavior of the patients suffering from a pathological condition like this man when you pass a stomach tube, as I have done here. By determining this condition with a soft tube you can do no possible harm to your patient.

This man then has a plain case of carcinoma of the œsophagus, which is already beginning to produce its starvation effects upon his system to a very considerable extent. He can still get down fluid food and he will have to continue with the use of that form of food. Pain is a symptom of this condition with some patients, though not with others, and this pain is excited by mechanical contact with the new growth in the œsophagus. It is for that reason he suffered so intensely as I passed down the tube, touching the neoplasm with its end. Other patients develop no pain at all when you attempt this manœuvre and I know of no grounds upon which I can explain this curious phenomenon. All we can do in the way of treatment for this man is to advise him to continue with the use of fluid diet as before.

DIABETES MELLITUS.

The next patient furnishes us an example of a very marked case of diabetes mellitus which has produced within a very moderately brief space of time a most profound effect on his general health. He is a man 30 years of age, and has noticed the symptoms he complains of for the past two or three months, though they have, probably, existed to a modified extent for a much longer period of time. Within the past two months he has lost considerably in flesh and strength and not only has he passed an increased quantity of urine which contains a good deal of sugar, but he has also a hunger that seems almost insatiable. He is no longer fit to do any work on account of his great debility.

This man has now been under treatment for this trouble over a month and has been kept during that time on a restricted diet and a solution of bromide of arsenic. The result of this treatment has been a marked

diminution in the quantity of urine voided, and, to some extent, in the quantity of sugar, though there is apparently no improvement in his weight or in his general health. This case is evidently one of a diabetes that is likely to present some difficulties in the way of treatment. For my own part, I think a great deal more of the effect on the patient's general health by the disease than I do of the quantity of urine or sugar that has been passed. For this reason in the treatment of patients I think more of the improvement in their general health than in the diminution of the quantity of urine or sugar passed. The nutrition of these patients gives us a cue to the severity of the disease and to the treatment.

The best thing we can do for this man then is to send him to the country and have him stay out of doors without doing work of any kind. It is a matter of great moment to him to pass as much of the day as he can in the open air and sunlight. He does not need exercise, he does not want to move about, but sit out in the open air under the light of the sun. Now, in regard to the kind of food he should take, I would advise him to take fat in some form or other, either in the shape of codliver oil or cream. If he is to take codliver oil he is to begin with small doses and run them up until he is able to take and digest ten or twelve tablespoonfuls a day of the oil. If, instead of codliver oil, he prefers to take cream, he can take this in a variety of ways. He should take as much as a pint of cream in the 24 hours. Then, with regard to the rest of his dietary, these are the ordinary rules governing the diet of diabetic persons, and that is to avoid the use of sugar and starches altogether. There are a good many diabetic patients to whom I would allow the use of wheaten bread as an article of food, but this man is too sick for that. We must get him down to the most restricted diet possible.

If this patient were one whom you could watch, a great deal might be gained by getting up bills of fare for him, yourself, suited to his condition. If you tell a patient he must not eat such and such articles of food, and he then goes away from your office and eats very little of anything, such a man as that will not do well at all. You must find out what articles of diet they like to eat and what things they do not like to eat. Bear in mind that the diabetic, as well as other patients, are people whom it is very necessary to feed properly and they have an appetite only for the articles of diet that they like best. This is a matter of a great deal of importance in the management of your patients and is a subject you should study in detail. There are people whom you can feed very well if you give them the right things to eat; and who would sooner starve them eat what they do not like.

Now, as regards the use of medicine for this man. There are a number of different medicines that we give for diabetes, and we give them all in a very empirical and uncertain sort of way. We do not know why any of them does good, and we are not sure that any of them will do good in a given case, but we know, on the other hand, that each of them is capable of doing some good in certain cases. The solution of the bromide of arsenic is a preparation that has been given a good deal, and with some success, in a considerable number of cases. In other cases, it does no good whatever. The same is true of the other preparations of arsenic, and according to the experience of different physicians, there are some who think that arsenic is of service in diabetes, while there are others who think it is of no use whatever. Then, beside arsenic and its preparations, opium is given either in the form of opium or of morphine or codeine. Codeine is the favorite preparation for this purpose, and, in my opinion, is the best form in which to give it. The trouble with all the forms of this drug is that it is very easy to begin its use but a very difficult thing to stop it after it has been taken for a considerable length of time. Then sulphide of calcium, given in doses of a quarter of a grain and run up to a half or one grain three or four times a day, is also used. This drug again answers for some patients and not for others. Iodoform has also been given for this condition and there are some who report good results from its use. In fact, I have seen some patients myself benefited by the use of this drug. It is generally given in pills or capsules in the proportion of one to three grains three or four times a day. Antipyrin, which has been given for almost everything, has also been given for diabetes, and good results have been reported from its use. I could go over a large number of drugs that have been given with more or less good results for the cure of diabetes.

The best thing that I can do for this man is to advise him about the proper place for him to live in and the food suitable for his condition. As regards his medicinal treatment, instead of continuing with the use of the bromide of arsenic I will give him arsenious acid, in combination with ipecac

and rhubarb according to the following formula:

℞ Acidi arseniosi.....gr. $\frac{1}{30}$.
Ipecac pulv.....gr. $\frac{1}{30}$.
Rhei pulv.....gr. $\frac{1}{30}$.
M. Sig. To be taken three times a day.

The only reason I give this preparation to bad cases like this man's, is because I have had better results from its use than other remedies which I have tried.

COMMUNICATIONS.

PENETRATING WOUND OF THE BASE OF THE BRAIN THROUGH THE LEFT ORBIT; HEMIPLEGIA; REMOVAL OF CLOTS FROM THE BASE OF THE BRAIN; RECOVERY.*

BY ERNEST LAPLACE, M. D.,
PHILADELPHIA.

R. B., aged 10 years, whilst at play on the lawn of his parents' country residence, fell on a broken fencing foil. The steel penetrated the left orbit between the inferior orbital ridge and the eyeball. The child was found a few moments later in an unconscious condition, with the instrument still in the wound. It was removed by a servant, and the child placed in bed.

I saw the case about five hours after the accident. Dr. Keyser, who was first summoned to the case, declaring, from an ophthalmoscopic examination, that the eyeball proper was uninjured.

There was coma, right hemiplegia, left facial paralysis, complete aphonia, respiration 30, pulse 140, temperature 104½°. Immediately above and about the centre of the left orbital ridge was an incised wound about one-quarter inch wide, from which oozed a little blood. Having but very meagre details of how the accident occurred, an exploration of the wound was determined upon. The patient being etherized, the cutaneous wound was slightly enlarged, and the handle of a Graefe cataract knife was inserted into the wound, and sank almost by its own weight to a length of three and one-quarter inches into the wound, taking a superior and internal direction.

Inasmuch as no spiculæ of detached bone could be detected, the probability was that the instrument passed through the sphenoided fissure, thence entering the base of the brain. The eye was apparently uninjured. There was, however, complete anæsthesia. Pupil dilated; insensible to light.

Having consulted with Drs. Keyser, Anders, and Shelly, it was determined to adopt the expectant plan of treatment; six ounces of blood was, however, extracted from the left median basilic vein.

May 17 (night of accident). Great jactitation of uninjured side of body. Quieted with ⅛ gr. morphia sulph. hypodermically, repeated in two hours. Temp. 103°, pulse 120. 5 grs. quinine suppositories; peptonized milk 2 oz. every three hours.

20th. Temp. 105⅗°, pulse 110, resp. 30. Sponged every fifteen minutes. 5 grs. quinine suppositories; ⅛ gr. calomel three times daily; peptonized milk. Jactitation continues; coma continues.

23d. Temp. 99.6, pulse 100, resp. 26. General condition unchanged.

25th. Temp. 98.6, pulse 72. Collapse. Cold extremities; cold sweat. Teaspoonful of brandy every half hour.

27th. Collapse. Temp. 96.8°, pulse 72. Brandy; $\frac{1}{60}$ gr. strychnine sulph. hypodermically every two hours.

During the intervals of collapse there was great restlessness. Great emaciation had taken place, and there was not the slightest improvement in the general condition of the patient. Judging that at least a part of the symptoms were the result of compression from a clot at the base of the brain, and wishing to offer a surface for the relief of tension within the cranium, trephining was resorted to on May 30th, thirteen days after the accident.

Operation. From the direction taken by the instrument it was evident that it had penetrated the middle fossa, and that hæmorrhagic clots should be sought for in that locality. Accordingly, the patient being etherized, a horseshoe incision three inches long was made in the temporal region, down to the level of the zygomatic arch, and the tissues were lifted *en masse* from the bone. The trephine was rested on the middle of the zygomatic arch, and a three-quarter inch piece removed, consisting of the temporal bone and a small fragment of the sphenoid; the dura mater appeared very congested.

To reach the centre of the base of the brain for the removal of the suspected clot, a miniature egg-beater, consisting of four loops of platinum wire, had been improvised; this was perfectly malleable, and could be insinuated between the dura mater and skull

*Read before the Philadelphia County Medical Society, November 25th, 1891.

without wounding the structures. Having reached the cavernous groove the instrument could be pushed no further; it was then turned on its axis for the purpose of catching the coagula in its loops. This was effectually done, and about a teaspoonful of clotted blood was removed piecemeal.

Whilst dragging more out, considerable venous hæmorrhage took place, most probably as the result of the removal of the clot that occluded the injured cavernous sinus.

The trephined opening was immediately plugged with iodoform gauze, and a graduated compress applied over it, secured by a tight bandage about the head.

May 31. Patient reacted well after the operation. Temp. 100°, pulse 72, rep. 22. Very restless.

June 3. Temp. 98.2°, pulse 80, resp. 24. Vomiting. Milk enemata every two hours. Dressings saturated with blood and serum. Slight return of consciousness; patient notices sounds.

8th. Temp. 97.6°. On dressing the wound the patient makes signs with uninjured hand, recognizing things about him.

11th. Temp. 97.8°. After an apparently great effort patient articulated a few words. Dressing completely saturated with serum. Motion has gradually returned in affected limbs. Hypodermic injection of strychnine sulph. $\frac{1}{30}$ gr. twice daily. Patient greatly emaciated.

15th. Temp. 97.3°, pulse 64. Speaks more distinctly. Memory remarkably clear; reason perfect. Dressings daily saturated with serum.

July 1. Patient's condition has steadily improved; voracious appetite. Massage, electricity, and general inunctions with cod-liver oil to increase nutrition.

10th. Secretion has ceased from the wound. A plastic operation was performed under ether by which the wound was closed. Union by first intention, except at the most dependent portion where a sinus remained about one month, giving exit to slight serous exudate.

September 1. Patient sits at table. Wound completely healed. Has gained 15 pounds. Remarkably bright and cheerful.

November 15. Has apparently equal use of both inferior extremities. Can stand and make a few steps without support. Pupil of left eye somewhat contracted. There remains anæsthesia of the eye and internal strabismus, showing in injury to the ophthalmic division of the fifth pair which supplies sensation to the eye, and an injury to the sixth pair which supplies the external rectus, giving a paralysis of this muscle, hence internal squint, thus corroborating our suspicion that the foil penetrated through the sphenoidal fissure. The improvement continues so steadily that everything points to an ultimate complete recovery.

I must here render thanks to Dr. James M. Anders, of Philadelphia, and to Dr. Shelly, of Ambler, Pa., for their unremitting aid in carrying out the medical treatment of the case.

Remarks.—1. From the direction taken by the instrument producing the injury, it is probable that it passed through the sphenoidal fissure, wounded the cavernous sinus, the crus cerebri and entered the left lateral ventricle.

2. The hemiplegia was due to venous hæmorrhage and laceration of the crus cerebri and other structures, no spiculæ of bone being detected.

3. The coma, hemiplegia, aphonia, and progressively unfavorable course of the patient were relieved after trephining, low in the temporal fossa, lifting the brain and removing blood-clots from the seat of hæmorrhage.

4. The vast amount of oozing and secretion from the opening, was evidence of the intra-cranial tension and of the absolute necessity of drainage.

5. Consciousness returned shortly after the relief of the intra-cranial tension. Phonation and articulation soon followed.

6. The brain is situated in an unyielding box of the cranium, and therefore when exposed to a great irritant, little allowance has been made by nature for the resulting expansion (congestion, swelling in other parts), following upon the irritant. With a view of remedying this condition, the brain if not in a position to expand freely as a result of the irritation, should by trephining be given an opportunity of drainage, which meets the same object by offering a spot of least resistance to relieve the tension within the brain.

The principle applies to many cerebral conditions where symptoms of general compression are the result of a local or a general irritant, within the cranial cavity. That this principle found a happy application in the present case, is evidenced by the great serous effusion which daily permeated the dressings.

7. We wish to exphasize, the safety of trephining near the base of the skull, the ease of arresting violent hæmorrhage from

the sinuses of the dura mater, and the importance of drainage in all cases of cerebral injury.

8. To our knowledge there is no recorded case of trephining as low in the temporal region, and removal of clots from the base of the brain.

OVARIOTOMY FOLLOWED BY VENTRAL HERNIA; OPERATION; RECOVERY.

BY D. BENJAMIN, M. D.,

SURGEON TO THE COOPER HOSPITAL, CAMDEN, N. J.

Mrs. S., aged 28, having had a fall a few months after she had been operated upon for an ovarian tumor, felt pain in the region of the incision, which had extended nearly from the umbilicus to the pubes.

In a few days an enlargement was noticed by her in the median line below the umbilicus, several inches in diameter, whereupon my attention was called to the case. I found a ventral hernia about three and a half inches in its longest axis, occupying the site of the former incision. A suitable support was applied and the patient was told that an operation would be necessary to cure the condition. Feeling more comfortable she delayed the operation for three weeks, at which time her consent was obtained to proceed; accordingly, she was placed under ether on the 27th day of March, 1890.

The question arose whether it is better in such cases to make the incision through the old cicatrix, or alongside of it. In this instance I decided to make the incision one-quarter of an inch to the left of the old incision—to the left, because if I had to proceed above the navel I could go to the left side, which is preferable. On opening the peritoneum I found the bowel had grown fast for a distance of three inches along the line of the old incision, and if the opening had been made in the cicatrix the bowel would have been in great danger of being opened. This fact has satisfied my mind as to the impropriety of reopening the abdominal cavity in the cicatrix of a former section, if it can be avoided.

The bowel was with great difficulty dissected from its close and strong adhesions along the old incision. It was found that the conjoined tendon and dense fibrous tissue along the linea alba had been separated, stretched and thinned out, and that a hernia had occurred alongside the adherent bowel, and had pressed before it the skin and superficial fascia. In order to obtain a strong and solid basis of union, the thinned out fibrous tissue was pared away until the thick tendinous structures underlying the anterior borders of the recti muscles was reached. Each of the muscles was exposed by the dissection.

This, of course, slightly reduced the parietal circumference, and would necessitate increased tension to bring the edges of the wound together.

On passing the hand into the abdominal cavity a fatty tumor three inches in diameter was found in the omentum, which tumor was responsible to some extent, for the undue internal abdominal pressure found to exist at the time of the operation.

I determined at once upon the removal of this mass. Double ligatures were passed through the omentum near its attachment to the stomach and colon, and the *entire omentum* and tumor were cut away and removed.

All the bleeding points having been secured and the toilette of the abdominal cavity carefully made, a row of deep sutures consisting of No. 14 Chinese silk was passed from within outward through the peritoneum and tendinous structures, taking in the sheathes of the recti muscles. These were placed about an inch apart. Before being tied an additional row of heavy silk sutures were passed from within outward, through all the tissues, including the skin and superficial fascia.

Deep sutures which included only the tendinous structures were drawn and tied tightly, beginning with the lower one and the suture next adjoining, which included all the tissues, was drawn up so as to prevent the catching of any portion of the bowel left untied. Proceeding in this manner, each of the deep sutures was tied and cut short, being therefore buried deeply in the abdominal parietes. This having been accomplished, the dense tissues were drawn strongly together, and the other sutures including all the tissues, were tied.

No unpleasant results followed leaving the heavy silk ligatures upon the omentum or buried in the abdominal walls, and sufficient time has now elapsed to enable us to say that the operation was entirely successful in curing what, at the time appeared to be a large and dangerous ventral hernia.

209 Cooper St., Camden, N. J.

THIOL is said to act well in constipation, one pill of 1½ grains daily for ten days.

ELEMENTS OF THOROUGH DIAGNOSIS.*

BY E. N. CAMPBELL, M. D.,
GOOD HOPE, ILL.

One of our American humorists has said that it is better not to know so much than to know so many things that are not true. Early errors accepted in the practice of medicine, as well as in other branches of business, are not easily gotten rid of. No subject (not the minutest thing) can be so exhausted that further thought and the insight of genius may not discover still deeper meanings, and more subtile relations. And thus the mighty labor becomes progressive, each generation receives its inheritance of knowledge, makes its own additions, and bequeaths the whole to its successor. So that we of the present stand as heirs of all the ages, in the foremost files of time. Life is too short, and humanity too frail, for one to undertake to solve all the great principles that arise before him. If there is one thing more than another that should give the heart cheer, it is to know we are dealing with facts, and that our time is not lost or wasted by unfounded and unproved theories. If a person would become proficient in the practice of medicine, he must early bend his energies towards that difficult problem of separating truth from error. In no profession do we find such heroic tendencies to error, than in this one of ours—the practice of medicine. And why? Remembering that medicine is not an exact science, and to be able to deduce truth from error, requires trained and well cultivated minds, as well as long and continued research, which at once indicate that the proficient practitioner unqualifiedly must become a life student and a diligent searcher for truth.

In the practice of medicine, as well as in other professions, we find persons who are not so constituted as to undergo the ordeal of much mental exertion, and in consequence of which they soon take up the line of empiricism, under the reputation of the profession, and gain for themselves a livelihood in accordance with their own ambition. The first prerequisite of a good diagnostician, is a clear head and an honest heart. If a person is in possession of these elementary qualifications, then is he fitly prepared to study and learn morbid signs and separate truth from error. The truth is, that the detection of disease is the product of close investigation and observation of symptoms, and of correct deduction from those symptoms. This art of observation implies close thought and practice. No one aspiring to become a skilful observer depends exclusively upon the writings of others. It must be by his own persistent and careful investigation, reflected from his own enlightenment, that he is enabled to elucidate the truth. The knowledge to be gained by reading is, of course, serviceable in this way; it helps in overcoming the main difficulties at first experienced, (*i. e.*) to know where to look, and what to look for. Of course, there are in almost every affection some symptoms which can be detected by the merest beginner, but others again which do not appear on the surface, and which will tax the most experienced physician to find. And it is in this search for hidden signs, that medical information as well as cultivated tact is demanded. In earlier days we could not go further than our eyes could see, ears could hear, and the sense of smell and touch could carry us. Science has lent her aid and furnished us means by the help of which we can clearly detect that of which before we only got a glimpse. We now possess instruments by which we can ascertain with accuracy the size of organs. Thermometers tell us of the fraction of a degree of heat. Specific gravity bottles give us the relative values of fluids.

The microscope unveils to our view the hidden mysteries of past generations. The laryngoscope demonstrates the appearance and the movements of that wonderful organ of speech. The ophthalmoscope informs us of the state of the vessels of the brain. And chemistry with its unparalleled teachings, is bringing to our minds amazing truths that belong to the morbid state. The effect of all these improved methods of study has been to give immense impetus to clinical research, and thus to lead to the establishment of solid ground work of experience, which certainly is in striking contrast with the looseness of former times. The advance in diagnosis thus attained, to me forms one of the most pleasing portions of medical history.

Now we will suppose the symptoms of a certain malady have been discovered, our next step in diagnosis would certainly be a proper appreciation of their significance, and relation toward each other. Knowledge, and above all, the exercise of the reasoning faculties are now indispensable. The daily habit of discovering disease, the skilful use of the microscope, and the searching analy-

*Read before the Military Tract Medical Association, October, 1891.

sis of chemistry would be of little use, unless we could place side by side the morbid signs they expose, and be able to consider their individual and respective value, otherwise the science of diagnosis would be simply a matter of memory. There are few symptoms in themselves distinctive, and often a symptom may be due to several causes. Semeiology informs us of their different causes, but to find out the precise meaning of the abnormal manifestation in a given case, we have to draw our inference from all the signs encountered, to compare them with one another, to seek out those that are in the background.

To accomplish all this effectually the physician has need of much and varied knowledge. He must be master of something more than the information supplied to him by semeiology. He must be an anatomist, a physiologist, and above all a pathologist in the full sense of the term.

From what has already been represented, he must be a correct *reasoner*, for, a good observer will, by bad reasoning, arrive at a faulty diagnosis, just as sometimes a bad observer by some process blunders into the truth.

There is indeed no end to the extent of knowledge which may be brought to bear in working out a conclusion regarding the character and seat of a malady.

Having thus indicated the elements of a thorough diagnosis, we may next inquire in what way this is the most easily arrived at, when at the bed-side. In the first place, we will say, the main facts of the case on which the deductions are to be based, must first be ascertained. Now, take these main facts, especially those which have the most direct sign or bearing on morbid action, then these morbid signs are coupled together, and we start a chain of inquiry as to what organ they point as the seat of the disease. This often has been already settled in your mind by the very mode of examination. Now right here is the place that so many practitioners switch off into mistakes, and I desire to call your especial attention to this point. Instead of jumping at once to a conclusion or being satisfied that the diagnosis is complete, we should proceed to investigate the precise nature of the disorder, by analyzing the symptoms, and the previous history. We must go back and compare the facts ascertained, giving each its individual bearing as compared with the peculiar history of the case.

As stated above, there are few signs in themselves pathognomonic, therefore special pathology is brought to bear on the accumulated symptoms, in order to establish a correct opinion.

Let us cite a case. A patient consults us for a cough brought on by exposure. He says he has been ill for four or five days, his health having been previously good. We notice that his breathing is hurried; he has fever; the lower portion of one side of the chest is dull on percussion, and the respiration there is wanting; the action and sounds of the heart are normal. The facts point to the lung or its coverings as the seat of disease. We also know from the history of the case that we have to deal with an acute disease. Now, are you about to say pneumonia? Right here, we must remember, comes in that particular time not to be in a hurry to conclude your diagnosis. It is much easier to take a little more time now, than to take back an opinion once given. We should first ask: What are the acute pulmonary affections? We say—acute bronchitis, acute phthisis, acute pleurisy, and acute pneumonia. In all these we have fever, cough, and impaired breathing. Now, do you say pneumonia? No, for notwithstanding there is in this complaint, in addition to the general symptoms mentioned, dulness on percussion, the dulness is associated with a blowing respiration. Whereas in the case before us, no respiration is heard. Look at the sputum, see if it is tenacious or rusty. Let us see if acute pleurisy will explain all these signs. The patient says that he had at the start, sharp pain in his side, and this we are aware takes place in pleurisy. Then take the local vibrations, they are noticed to be absent on the affected side of the chest, which when measured, is found to be enlarged. The disease is, therefore, pleurisy in the stage of effusion. This process of arriving at an opinion is the simplest, and it is astonishing how rapid it may be performed, by habit. This method aims so far as the symptoms permit at a direct diagnosis, which in truth is differential. To prove what a thing is, by proving *all* that it is not, is a very tedious process. Yet, there are many close observers who depend upon the process of exclusion to clearly establish diagnosis, but owing to the many drawbacks diagnosis by exclusion is not on ordinary occasions to be encouraged. The most serious obstacle to a precise diagnosis, lies in the fact, that frequently lesions coexist. We know that disease is a very complex state and when one portion of the economy gets out of order, another is apt to follow. One great advantage, indeed, of attending carefully to diagnosis, is, that it enables us to use

remedies knowingly, and with decision, and appreciate what they are effecting. It is sometimes urged that the accurate detection of disease, makes timid practitioners, and deprives them of confidence in medicines. Nay, verily, but it does show, unfortunately, that our skill to detect disease is far in advance of our power to cure it. Therefore, gentlemen, the medical man who is able to clearly and intelligently diagnose his case is also able to give a correct prognosis regarding it, and in any event that follows, if these two elements have been correct, it forms one of the strongest bulwarks the practitioner can possess, and puts him in position to face the ever present conflict of a criticising public, and justly crown him with an abiding confidence that truth and merit will always prevail.

MODIFIED JUNKER INHALER, WITH POINTS FOR DISCUSSION ON ETHER AND CHLOROFORM NARCOSIS.*

BY MARIE B. WERNER, M. D.

My object in presenting this inhaler before the Society is not alone because I consider it the best of its kind ever brought to my notice, and therefore concluded it might be of interest to some of the members here to-night, but also to learn something about the pros and cons regarding the use of ether and chloroform as anæsthetics.

This inhaler has the respiration indicator approved of by the Hyderabad Chloroform Commission, and in addition has a graduated stopcock which will, if properly adjusted, control the volume of air forced through the bottle containing the anæsthetic, thus giving a continuous current.

The bottle should be but partially filled—4 to 7 drachms—thus allowing the contents to pass over through the tube to the face-piece in the form of vapor. If chloroform is used, with one compression of the bulb 5.19 cubic inches of air are forced through the liquid, and will evaporate, in a temperature of 68° F., about one minim; a trifle more than one cubic inch of the vapor passes through the short tube into the face-piece.

The noteworthy points are that the patient does not inspire much, if any, of the expired air; the apparatus is clean and can be kept so with little trouble; the quantity of the anæsthetic used is comparatively small; and last, but not least perhaps, the character of the respiration is always indicated to the operator as well as the anæsthetizer.

The character of the respiration seems to be of vast importance if we accept the report of the Hyderabad Commission, based upon an almost unbroken series of 45,000 cases of chloroform administrations extending over 40 years, in which the anæsthetizers were guided entirely by the respiration, and there was not a death. In strict accordance with these clinical facts the experimental data of the Hyderabad Commission prove —[1]

"1. That the administration of chloroform is free from risk if the breathing is perfectly regular throughout and the inhaler is stopped as soon as the animal is fully under its influence.

"2. That chloroform never causes death by sudden stoppage of the heart.

"3. That death from chloroform is always the result of an overdose.

"4. That the danger of overdosing is enormously increased by holding the breath, struggling, asphyxia, or anything which causes the patient or animal to take gasping inspirations.

"5. That the inhibitory action of the vagus nerve, which is called into play in threatened and actual posioning with chloroform, is a safeguard."

I do not wish to give the impression that I advocate chloroform in all cases, but think many will admit that there are cases where it has advantages over ether, provided it can be given with safety to the patient. For instance, in cases of bronchorrhœa it is less stimulating to the mucous membrane; in certain pathological conditions of the kidneys it can be relied on with greater safety. Last and perhaps not least to be considered is the small quantity necessary for a large operation, thereby possibly obviating some of the unpleasant after-effects of ether, notably the nausea, vomiting, and depression which sometimes follow a prolonged operation.

There is one point I have not yet been able to develop, and that is the utility of this apparatus in giving ether. Although I have been assured it would behave satisfactorily, I have not had sufficient opportunities to demonstrate in with any degree of certainty to myself; but feel sure, however, if it could be utilized it would mean economy of ether and greater comfort to the patient.

*Read before the Philadelphia County Medical Society, November 25th, 1891.

[1] Lancet, November 29th, 1890.

This inhaler may be obtained from Messrs. Krohne & Senseman, London. (For discussion, see Society Reports).

Society Reports.

PHILADELPHIA COUNTY MEDICAL SOCIETY.

Stated Meeting, November 25th, 1891.

Papers were read by Dr. Ernest La Place (see p. 1004), by Dr. John B. Roberts (to be published in the Reporter, Jan. 2nd) and by Marie B. Werner. Dr. Werner's paper was entitled, "Modified Junker Inhaler, with Points for Discussion on Ether and Chloroform Narcosis." (See p. 1009.)

DISCUSSION.

Dr. Joseph Hoffman:—I have used this instrument quite a great deal, and its utility for chloroform inhalation is unquestioned. The quantity of chloroform required is much diminished by its use; for an extended abdominal operation I have more than once had a drachm of chloroform suffice. Nor have I seen any bad effects from chloroform when this instrument was used, although I do not believe that the bad effects are completely obviated. In two or three cases I have found that ether had to be abandoned and chloroform substituted.

So far as the report of the Hyderabad Commission is concerned, I do not think that in this country it will be accepted as final. The results of experiments on animals are not always applicable to man. In the sudden deaths in man, fatal result is brought about by action of the anæsthetic on the heart, and not on the respiratory apparatus. Chloroform paralyzes reflex action, while ether stimulates it. In children there is little danger from chloroform, and in children too the reflexes are stronger than in adults.

So far as the application of this apparatus to the administration of ether is concerned, I do not think that it will work, as it is not possible to obtain a dense vapor of ether in sufficient quantity. If the apparatus were modified so that a larger quantity of vapor might be produced, the effect might be better. Finally, too, it is to be insisted, that to obtain good results and to escape the dangers of anæsthesia, we must depend rather on the anæsthetizer than on any apparatus he uses.

Dr. James Collins:—I recall very well the time when we had no ether. It was chloroform. Chloroform was found in all the medical chests and was given with impunity. We never thought of danger, provided the man was sufficiently recovered from shock. I saw only one accident from chloroform, and that was after the battle of the Wilderness. We had been giving chloroform all day, when a man came in with a wound of the hand; he took a few whiffs of ether, and expired. In his case the rule had not been observed—that is, not to give the anæsthetic when the man was under the influence of shock. The shock from gunshot wounds often acted strangely. Men with severe wounds would walk long distances to the hospital with no signs of shock, and yet, when placed in bed would, in a few minutes, present marked evidences of shock. It was with some regret that I saw the reaction against chloroform that came later. Chloroform is certainly more pleasant than ether, and I think that if properly given it is as safe as ether. I have seen death from ether. It was a case of pistol-shot wound; ether was given and the shock came on while the man was under the influence of the anæsthetic, and he died. Many years ago, at the University, we gave a mixture of ether and chloroform. From that, I saw no accidents.

Dr. Joseph Leidy:—The only death that I have seen from an anæsthetic occurred while chloroform was being administered with this apparatus. The chloroform was administered by a gentleman who had been in the habit of using this instrument almost daily for months. I think, however, the death would have occurred whether the instrument had been used or not.

Dr. John B. Roberts:—I have seen six deaths attributed, and probably justly, to anæsthetics. Fortunately, in none of these was I the administrator of the anæsthetic. I never have a patient etherized without feeling a great deal of discomfort, especially if the ether is given by the ordinary individual that administers ether. The majority of them do not know how to give ether unless they have seen a death, or nearly killed someone by ether. If ether or chloroform is given 100,000 times without a death, it is no proof that there is no danger in the administration of ether or chloroform. Although the Hyderabad Commission decided that chloroform is better than ether, yet I think that Dr. Wood echoes the senti-

ment of this portion of the country, at least, when he says that ether is the safer.

It seems to me that the difficulty is that the anæsthetic is placed in the hands of incompetent people, who do not know how to give it and do not pay attention to their work. In several of the cases of death from anæsthesia which I have seen, I believe that the result was due to the carelessness of the administrator. A short time ago I saw a patient nearly die from ether, and he was only kept alive by about an hour and a quarter's artificial respiration. The trouble in this instance was due to the fact that I, the operator, called the attention of the anæsthetizer from his work. I have scarcely used chloroform, and have seen very little of its use, but if the evidence of literature is worth anything, it is in favor of ether. I do not believe that it is the shock of injury; I believe that it is the chloroform that kills. Chloroform is certainly the more powerful and more dangerous agent. In spite of the objections to ether, it seems to me that the opinion of the Philadelphia profession in favor of ether is correct, and is borne out by the literary evidence.

Dr. T. S. K. Morton:—I have had an opportunity of examining this apparatus, and so far as apparatus' go, it seems superior to any that I have seen. But I do not see that any method for administering chloroform can be better than the little wire frame, invented, I think, by Esmarch. So far as ether is concerned, I dispense with all apparatus; especially do I dislike the Clover apparatus, where the patient respires the same air over and over. In most cases ether is given badly. Just as I have learned to give ether in less condensed form, so have my results been more satisfactory. The cone, as usually employed, is extremely objectionable; and towels as found at patient's houses are usually impregnated with starch and will not absorb the ether or allow air to pass freely through. Unless you obtain very old towels or napkins, it is either difficult to etherize the patient, or you have to give the ether in too concentrated form. Some two or three years ago it struck me that it would be well to use cheese-cloth for this purpose, and since then I have used nothing else. I use small squares, about six by seven inches, consisting of ten or twelve thicknesses of the gauze. This is placed over the patient's face and the center raised up by puckering the lateral edges. This offers no obstruction to the passage of air. The ether is dropped upon the centre of the gauze from above. I have etherized a child by this method, and kept it under the influence of the anæsthetic for ten minutes, with but one drachm of ether.

Dr. Werner:—In presenting this apparatus, I do not wish to be understood as advocating the general use of chloroform. It seems that there are some cases in which it can be used with better advantage than ether, and, therefore, it is well to know the best method of administering it. I think that the trial alluded to by Dr. Hoffman with this apparatus for ether was not a fair test. The patient was difficult to etherize at best, and seeing that, I used the towel. I had occasion to try it again for a smaller operation, and it answered admirably. In answer to Dr. Morton's remark about the unequal supply of vapor and air, I would like to call attention to the fact that this stopcock, if adjusted properly, will give a continuous current of air. I think Dr. Morton's plan of giving ether better than the towel. I heartily endorse Dr. Robert's statement that there is often not sufficient care and attention given by the anæsthetizer to the work in question, and feel certain the operator can work with greater freedom when the mind is at rest in that direction. I think there is room for improvement in the methods of administering both ether and chloroform.

Selected Formulæ.

RHEUMATIC ENDOCARDITIS.

Prof. DaCosta prescribed the following for a boy ten years of age:

℞ Tinct. strophanti.....m ij.
Tinct. cardamom. comp.....f 5 j. M.
Sig. Three times daily.

—*Coll. Clin. Rec.*

RHEUM IN ROUND WORMS.

Dr. Martin (*Les Nouveaux Remédes*, No. 3, 1891), praises the following in round worms:

℞ Tinct. rhei.....gtt. xxx.
Magn. carb.....gr. iij.
Tinct. zingib.....gtt j.
Aq. destillat.....f 3 ij.
Sufficient for one dose.

To be taken three or four times daily.

NUTMEGS IN HÆMORRHOIDS.

The common nutmeg employed in the form of an ointment is said to give prompt and permanent relief in itching and painful piles. It may be employed as follows:

℞ Pulv. nuc. moschat.....3ij.
Acid. tannic.....3j.
Petrolat.....3j.

SCHENK'S PULMONIC SYRUP.

The following formula for Schenk's Pulmonic Syrup was given to me by an old lady several years ago, who professed to know all about the late Dr. Schenk when he commenced:

℞
Wormwood.
Catnip.
Tansy.
Hyssop.
Hoarhound.
Hops
Chamomile.
Comfrey.
Senega.
Elecampane, aa.....ʒ ss.

Boil with sufficient water to make, after straining, one quart, add—

Gum arabic.
Licorice, aa.....ʒ jss.

Then one good-sized Indian turnip, and finally add—

Sugar.....lb. ʒ.
Brandy.....pt. ½.
Juice of two lemons.

—H. M. Wilder, in *Pharm. Journ.*

BECKER'S EYE SALVE.

℞
Calamine.....ʒ jss.
Tutty.....ʒ jss.
Red oxide of mercury.....ʒ vj.
Camphor in powder.....ʒ j.
Almond oil.....ʒ j.
White wax.....ʒ jss.
Fresh butter.....ʒ viij.

Reduce the mineral substances to a very fine powder and incorporate with the oil, in which the camphor has been dissolved with the wax and butter, previously melted together.—*Kilner's Modern Pharmacy.*

INTERTRIGO.

R. L. Paterson recommends for severe chafing or intertrigo the following:

℞
Camphoræ.....ʒ ij.
Acid carbolici.....gtt. xv.
Cretæ precip. (English).....ʒ ij.
Zinci oxidi pulv.....ʒ ij.
Ol. nerolii.....gtt. v.
Ol. rosæ.....gtt. ij. M.

Sig. Rub the camphor to a fine powder, using alcohol to reduce it, and mix the other components thoroughly.

This powder is invaluable for healing raw and excoriated surfaces, and for sunburn. Mixed in the proportion of one part to three of ung. petrolatum or ung. aquæ rosæ, it forms a most useful salve.—*Med. Summary*, Sept., 1891.

WICHERSCHEIMER'S FLUID.

For the preservation of anatomical and pathological preparations, Dr. F. J. Lutz, 105 South Broadway, has kindly furnished the formula taken from *Nu Yorker Medicinische Wochenschrift*, Sept., 1891, copied from No. 23 of the *Polytechnisches Centralblatt:*

℞
Alum.....gr. c.
Sodium chloride.....gr. xxv.
Potassium nitrate.....gr. xij.
Potash caustic.....gr. lx.
Arsenious acid.....gr. x.

Dissolve in 3,000 g. of boiling water. The solution is allowed to cool and is then filtered.

To each 10 litres of this neutral, odorless and colorless fluid are added four litres of glycerin and one litre of methyl-alcohol.

If the preparations are to be preserved in a dry state they are kept in the fluid for from six to twelve days, according to size, and then exposed to the atmosphere.

It is claimed that specimens treated by immersion in the fluid can be used for scientific demonstrations and in medico-legal inquiries after many years. They do not decompose and are odorless.

RHACHITIS.

Kassowitz, after an experience with 25,000 cases, discards the theory that rickets is due to a want of calcareous salts in the food, and believes it results from an inflammatory hyperæmia of the osteo-genetic tissues. He, therefore, considers the administration of the salts of lime useless, and does not forbid the use of starchy foods. He recommends the use of phosphorus in cod-liver oil $\frac{1}{120}$ grain of the former in a teaspoonful of the latter. If there is any reason for not giving the oil he uses lipanine, as in the following:

℞
Phosphori.....gr. ⅙.
Lipanine.....ʒ j.
Sacch. alb.
Gum. Arabic, aa.....ʒ ss.
Aq. destil.....f ʒ j.
Ft. Emulsionem.
Sig. ʒ j, daily.

—*Rev. Menst. des Mal. de l'Enfant.*

STYROGLYCEROL FOR CHAPPED HANDS.

The *Deutsch-Amerikanische Apotheker Zeitung* gives the following:

℞
Tinct. of benzoin.....parts iv.
Glycerin.....“ viij.
Green soap.....“ j.
Rose-water.....“ xvj.
Mix.

ACUTE BRONCHITIS.

Dr. H. C. Wood recommends the following:

℞
Potass. nitrat.....ʒ j.
Suc. limonis.....f ʒ ij.
Syr. ipecac.....f ʒ ss.
Syr.....f ʒ vj.
M. Sig. A tablespoonful four to six times a day.

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LEADING ARTICLE.

GONORRHŒA IN WOMEN.

The more exact studies of the present have expanded very greatly our knowledge of gonorrhœa in women. It is but a little while since this disease in women was considered as trivial; as being only a vulva-vaginitis which would recover even without treatment in six weeks; and as meriting attention, not so much because of the evil it might do the woman, as because of the possibility of the disease being conveyed to men. Enlarged experience has shown this conception of the affection to be not only inadequate, but even partly erroneous. The error is with reference to the usual seat, which has been shown to be the cervix uteri and not the vagina. It is now well established also, that far from the disease terminating spontaneously it tends to persist in a chronic form for a very long time—almost indefinitely. The disease tends to invade the entire genital tract. Not only the vulva-vaginal glands but the endometrium, tubes, ovaries and the peritoneum—even distant organs and tissues as the knee or ligaments of the spine may be affected. Thus, incurable or even fatal conditions may and frequently do arise from this disease heretofore considered so trivial; not to consider the extension of the disease to the urinary organs, where it may produce the same serious conditions which it does in men.

The cause of the disease is still disputed, but the evidence is certainly satisfactory that it is the gonococcus of Neisser. The studies of Neisser, Bumm, Menge, Saenger, Wertheim and others seem to be conclusive on this point. Wertheim, in a paper read before the German Gynæcological Association at its last meeting reports the demonstration of the presence of the gonococcus and the absence of other germs in the pus from numerous cases of pyosalpinx, and in two cases of abscess of the ovary, suspected to be gonorrhœal in origin. In three cases gonococci taken from cultures obtained from germs contained in tubo-ovarian pus, and

inoculated in the human urethra produced a typical gonorrhœa, showing not only the presence of the gonococci in the pus but also that in these cases the germs had retained their virulence.

It has been shown that the internal os uteri is a fairly effectual bar to the further progress of the disease toward the peritoneum. Hence, it is of interest to know under what conditions the corporeal endometrium and the tubes become affected. It is assumed by some writers that menstruation and coition favor the spread of the disease from the cervix to the uterus, but no very strong evidence in support of this is available. But the evidence is demonstrative that the infection can be and is carried on the examining finger during abortion or labor from the vagina or cervix to the corporeal endometrium, and that it is also carried in the same way when the uterine sound or applicator is introduced into the uterus in cases of gonorrhœal vaginitis and endocervicitis. The practical deduction from these facts is, that the condition of the genitalia of puerpera should be investigated when they come under our care, and if purulent or irritating leucorrhœa is present, vigorous germicidal and astringent treatment should be instituted to guard against possible, and even probable, gonorrhœal puerperal inflammation in the mother and ophthalmia in the child. A further argument is here found against the indiscriminate use of the sound, especially when passed through the vaginal and cervical secretions without the aid of the speculum, and without the previous cleansing of the parts.

Bacteriologists differ as to whether intraperitoneal abscesses and other deeply seated inflammations are due to the gonococcus or to some other germ also present and constituting mixed infection. The solution of this question will be of importance, but what interests the clinician far more is, that gonorrhœa unless cured promptly, before it invades the endometrium, may induce incurable tubal inflammation, ovarian abscess or purulent peritonitis, and necessitate abdominal section and removal of the diseased organs to save life, or to rescue the sufferer from chronic invalidism.

Every practitioner must learn the important lesson that gonorrhœa is a serious disease, which may even destroy life immediately or remotely. Also, that it is a most intractable disease since the cocci can retain their vitality when lodged in the folds of the vagina, or in the cervix uteri or in the urethra, where it is difficult to reach and destroy them. Gonorrhœa should be treated actively by sublimate douches, the application of silver nitrate solutions, tannin packing, etc., until all signs of the disease disappear. Then the patient should be told of the tendency of the disease to recur by reason of its spread from some concealed nidus, and she should be instructed to present herself for examination at monthly intervals for at least six months after the disease is apparently cured. A candid description of the not improbable consequences of neglecting this advice—gonorrhœal salpingitis with recurring attacks of peritonitis, with invalidism or death—is usually a sufficient incentive to the patient to induce her to follow the instructions. Were these principles of treatment more faithfully carried out with men as well as women, the number of sterile women, and of invalids from pelvic inflammatory mischief, would be greatly lessened, and the field of usefulness of the abdominal surgeon, thereby, greatly curtailed.

Book Reviews.

THE PHYSICIAN AS A BUSINESS MAN; OR HOW TO OBTAIN THE BEST FINANCIAL RESULTS IN THE PRACTICE OF MEDICINE. By J. J. Taylor, M. D., Philadelphia. The Medical World. Price, $1.00.

The author of this little book, to use his own words, has endeavored to outline a practical business policy for the physician, while living and practicing under the present economic system. In its compilation he has made liberal use of clippings both from the medical and secular press, and freely interspersed his individual views. The subject is one which seems to be all but utterly neglected, and there can be no question about the enormous amount of good that would accrue to

the profession if many of the suggestions offered were earnestly carried out. The physician, considering the nature of his work, is the worst paid man in existence, and the reason for it is largely due to his seeming indifference to business methods.

This book can be read with profit, especially by those who have just entered, or are about to enter, the profession.

SAUNDERS' POCKET MEDICAL FORMULARY: WITH AN APPENDIX. By WILLIAM M. POWELL, M. D., Philadelphia: W. B. Saunders, 261 pp. Price, cloth, $1.50; tucks, $1.75.

Dr. Powell has brought together in this handy little formulary 1734 prescriptions from authors of repute, and covering almost the entire field of pharmaceutical therapeutics. Its value is very much enhanced by a thumb index, so that one is enabled to turn at once to any disease and find a number of prescriptions from which to select. Besides the above valuable formulæ there is a dose table, formulæ and doses for hypodermatic medication, poisons and antidotes, cuts of the female pelvis and fœtal head with diameters, a diet table, table for calculating the period of gestation, and drugs and materials used in antiseptic surgery.

The practitioner will find this formulary of great usefulness, not so much for the prescriptions themselves as for the many suggestions of pharmaceutical combinations and the excellent memoranda.

PERISCOPE.

THERAPEUTICS.

CHLORALAMID IN EPILEPSY.

At the October meeting of the New York Academy of Medicine, Dr. Chas. L. Dana, Professor of Diseases of the Mind and Nervous System, New York Postgraduate Medical School, in speaking of symptomatic treatment of epilepsy refers to chloralamid as follows: "The most valuable adjuvant was hydrate of chloral, but I have found a new drug in chloralamid, which does all the good ascribed to the former drug, without affecting the heart or circulation."

TREATMENT OF DIABETIC COMA.

Reynolds, after referring to the recent papers by Dickinson advocating Fagge's method of treating diabetic coma by intravenous injection of saline solutions, recommends (*Med. Chronicle*, August) the administration of a large amount of saline solution by the mouth. In the case of a man with rapidly approaching symptoms of diabetic coma he ordered an aperient, telling the patient to drink during the night at least a gallon of fluid, together with an ounce every hour of a mixture containing 60 grains of citrate of potash to the ounce. Next morning the man was slightly better, and the treatment was continued for another twelve hours, the citrate of potash being lessened in quantity. In three days all symptoms of coma had passed away, the sugar had again increased in quantity, the acetone had disappeared from the breath and urine, and the albuminuria had entirely ceased. In a second case a similar plan of treatment was followed by a like happy result. Dr. Reynolds emphasizes the importance of recognizing the earliest warning of impending coma, and lays stress on the following points: A distinct sense and appearance of increased weakness, slight drowsiness, pain in the left hypochondrium, labored respiration, the expiration being especially prolonged, an acetone-like smell in the breath and urine, lessened excretion of sugar, so-called acetone reaction (port wine coloration with perchloride of iron) in the urine, and albuminuria. When such symptoms are present the patient is in the greatest danger. The treatment is absolute rest in bed, moderate purgation, a slight relaxation of the diabetic diet, large doses of citrate of potash, and very large quantities of fluids taken internally; these fluids may consist of milk, lemonade, tea, water, or barley water; the quantity should amount to nearly a gallon in the twelve hours.—*Brit. Med. Jour.*

TREATMENT OF ASTHMA.

Prof. Dieulafoy (*Gaceta médica catalana*, Tomo XIV, No. 1) treats asthma as follows:

1. If the attack is just coming on, he applies the following to the interior of the nasal cavity:

℞ Cocain. muriat.....gr. xv.
Aquæ destillat.....f℥ v.

Or this solution may be applied to the nasal cavity or throat by means of a spray, a teaspoonful being thrown in in four or five minutes. If this does not suffice six to twelve drops of pyridin may be inhaled from a handkerchief, or three to four grammes (1 fl ʒ) may be poured upon a cloth and kept near the patient's chair. Stramonium leaves and nitrated paper may be stuffed into a large pipe in alternate layers and smoked if the attack is well under way.

If the attack is at its height, then one may inject half a hypodermic syringeful of:

℞ Morphin. mur.....gr. jss.
Aquæ destillat.....f3 ijss.

This usually has a sedative influence. Repeat in a quarter of an hour, if necessary.

2. In the intervals administer the iodide of potash, 1.50 to 2 grammes (22–30 grains) daily, commencing with 2.6 decigrammes (4 grains) a day, and increasing the dose to one, one and a half, and even two grammes (15, 22 and 30 grains), if the asthma be of long duration.

3. If the disease be of diasthetic origin give during fifteen days one to two grammes (15 to 30 grains) of the iodide of potash, to follow with fifteen days belladonna:

℞ Pulv. folior. belladonnæ.
Extract belladonnæ, aa.....gr. iij.
Sufficient for twenty pills. Commence with one-half a pill, increasing to one pill a day.

At the same time prescribe:

℞ Sodii arseniat.....gr. j.
Aquæ destillat.....f3 ijss.

This treatment should be continued three to six months.

4. If there be emphysema, inhalations of compressed air.

Residence in mountainous and elevated countries should be avoided. Strong odors are among the exciting causes.

RULES FOR THE ADMINISTRATION OF COCAINE.

Dr. Magitot, in the *Repertoire de Pharmacie* for August 10th, 1891, formulates the following rules which should govern the employment of cocaine as an anæsthetic:

1. The dose of cocaine injected should be appropriate to the extent of the surface desired to render insensitive. It should not exceed in any case 1 grain to 1¾ grains. Each dose should be restricted in large surfaces.

2. Cocaine should never be employed in cases of heart disease, in chronic affections of the respiratory apparatus, or in nervous subjects; and this exclusion applies also to other anæsthetics.

3. Cocaine should be injected into the interior and not under the derm of the mucous membrane of the skin. This is the intradermic method of Reclus, which should be substitututed for the hypodermic method. By this means the introduction of a substance into the vein is avoided and the risk of accidents therefore minimized.

4. The injections should always be practiced upon the subject in a recumbent position, and he should only be raised when the operation is to be performed upon the head and mouth, and then only after anæsthesia is complete.

5. The cocaine should be absolutely pure, since, as pointed out by Laborde, its mixture with other alkalies forms highly poisonous compounds.

6. Cocaine should be injected in divided doses, with a few minutes' intervals.

7. Suspension of administration, or, as the author terms the method, "fractional injection," renders it possible to guard against the production of sudden symptoms of poisoning.—*Therapeutic Gazette.*

IODOFORM INJECTIONS IN GOITRE.

Dr. Kapper, an Austrian military surgeon, has employed in fifteen cases, with invariable success, Mosetig's plan of injecting iodoform emulsion into soft thyroid tumors. In every instance there was a diminution in the circumference of the neck amounting to from 8 to 10 cm. Antiseptic precautions were employed, and in some cases where the tumor was of considerable dimensions several syringefuls were injected into different parts of the parenchyoma. In order to ascertain whether the needle has entered the gland the patient is asked to swallow, when, if it has so entered, the downward movement of the syringe shows that the needle has been carried upwards. In some cases the injections were repeated daily for several days, in others at intervals of a few days. In no cases were any untoward symptoms produced.—*Lancet.*

INTERSTITIAL INJECTIONS OF CAMPHORATED NAPHTHOL IN TUBERCULOUS ADENITIS.

Dr. Reboul, whose treatment of tuberculous glands by interstitial injections of camphorated naphthol has already been referred to, has recently made a further communication on the subject (*Sem. Méd.*, September 23rd, 1891). Since his first communication to the Paris Société de Chirurgie, in 1890, which was based on 27 cases, he has had 5 more, which added to 15 unpublished cases reported in an inaugural thesis by David, make a total of 47 cases. In 43 of these the cervical, in 1 the axillary, and in 3 the inguinal glands were affected. In 18 cases the glands were hard, in 24 they were softened, and in 5 they were ulcerated. Of the 47 cases 28 were cured and 19 improved. Of the 32 cases observed by Reboul himself, 19 were cured and 13 improved. The cure,

however, was not complete, that is to say, the tuberculous adenitis did not entirely disappear in all cases, but there could be no doubt as to the remarkable improvement and the favorable modification of the morbid process. The treatment is absolutely harmless, and seems to act beneficially both on the local and on the general condition.

Dr. Reboul, (*ibid.*) has treated in the same way three cases of tuberculosis of the testis. In one of them he injected some drops of camphorated naphthol through a fistula; in the two others the substance was injected interstitially into the tuberculous nodules on the epididymis and testis. The result was very marked, induration taking place with progressive diminution of the neoplastic formation, and closure of the fistulæ. More recently M. Reboul has treated two further cases in the same way, injecting four to five drops every eight or ten days. Whilst admitting that these cases are too few to warrant definitive conclusions being drawn therefrom, he thinks himself justified in affirming that as the result of the treatment the evolution of the disease was checked, the tuberculous nodules diminishing in size and the diseased parts becoming manifestly hardened, showing that a process of sclerosis had become which it might be hoped would lead to complete cure.—*Brit. Med. Jour.*

MEDICINE.

SPONTANEOUS LUXATION OF THE HIP AS A RESULT OF GONORRHŒAL COXITIS.

The *Centralblatt für Chirurgie*, No. 38, contains the record of a case in which Dr. Karewski, of Berlin, removed the head of the femur after disorganization of the hip-joint originating in gonorrhœal arthritis. In most instances of gonorrhœal affections of joints the effusion is speedily absorbed and all traces of disorder are removed, but occasionally very serious articular changes result. The acute inflammatory stage may be followed by fibrous ankylosis of the articular extremities of the bones, or it may lead to suppuration of the joint, and consequent disorganization. The subject of the case reported in this paper was a woman, aged 41, who shortly after an attack of gonorrhœa had been seized with very intense pain in the left hip. The patient was treated by rest, and the lower limb was placed with the thigh flexed, and the knee rotated outwards and abducted. When the case was first seen by Dr. Karewski after an interval of six months, the left lower limb was two inches shorter than the opposite limb, the trochanter was much elevated, and the soft parts of the extremity were much wasted. The hip-joint was very stiff, and the patient was unable to perform any active movement, and could not tolerate the least passive movement. On examination of the hip, whilst the patient was under the influence of anæsthetic, Dr. Karewski found that the head of the femur had been displaced, and no longer occupied the cavity of the acetabulum. The case was diagnosed as one of spontaneous luxation resulting from acute gonorrhœal monarthritis, and due to excessive effusion into the joint, and a faulty position of the lower limb. As reposition of the head was impracticable, and no improvement could be anticipated from extension of the limb, the head of the bone was excised. It was found dislocated beyond the upper margin of the acetabulum: the round ligament had been destroyed, and almost all the articular cartilage absorbed. The acetabular cavity was occupied by a large mass of succulent connective tissue. The patient made a good recovery.—*Brit. Med. Jour.*

THE VIRULENCE OF PNEUMONIC SPUTUM

Bordoni-Uffreduzzi (*Centralblatt f. u. Parasitenk.*, September 18th, 1891) has sought to determine the length of time during which pneumonic sputum, when dried by exposure to the air, retains its pathogenic activity. His procedure was as follows: The sputum was collected and dried in a room at the ordinary temperature, some of the sputum being exposed to diffused daylight for a number of days, the rest to direct sunshine for twelve hours. At intervals a little of the sputum was mixed with water and injected subcutaneously into a rabbit. Experiments made with the sputum treated as first described showed that the virulence continued for at least nineteen days, every inoculated rabbit dying within a few days. Indeed, some additional experiments prolonged the period of potency to fifty-five days. Sputum, on the other hand, that had been exposed to direct sunlight for even as long as twelve hours remained equally potent, a fatal result in each case following upon its injection. Clearly pneumonic sputum possesses considerable power of resisting both desiccation and sunlight. Bor-

doni-Uffreduzzi concludes that not only is it important to destroy the sputa of pneumonic patients, but that the sick-room should be disinfected as after other infectious diseases. —*Brit. Med. Jour.*

SUBCUTANEOUS EMPHYSEMA FOLLOWING BRONCHO-PNEUMONIA.

Dr. Damsch, of Göottingen, points out that the occurrence of subcutaneous emphysema in association with disease of internal organs is extremely rare. It is generally produced during some act of respiratory effort, such as straining, prolonged crying, violent vomiting, etc., but is commonly found to be limited within the alveolar or subpleural tissue of the lung itself—the so-called interlobular emphysema. This condition is not always productive of diagnostic signs, unless it spreads to the mediastinal tissues. Children are on all hands admitted to be more liable to rupture of the pulmonary alveoli than adults, but almost all writers agree that simple whooping-cough, unless accompanied by tuberculous or inflammatory disease, is hardly ever productive of subcutaneous emphysema. The latter has been produced by phthisis, especially where tuberculous ulcers are present in trachea or bronchi, and by other forms of disease tending to weaken the bronchial walls. The air, as a rule, passes from the mediastinum to the surface along the course of the great vessels. A case is recorded in which a gradually progressive condition of subcutaneous emphysema affecting the left half of the head, face, and body, showed itself in an infant, aged fifteen months, in the course of broncho-pneumonia of both bases. The emphysema attained a degree described as monstrous, but the child did not appear to suffer from it, becoming quietly somnolent until its death. On examination, it was found that extensive interstitial emphysema was present over the upper lobes of both lungs, forming several rows of tiny subpleural bubbles, some of them as large as a bean. The rest of the lungs, except where consolidated by the broncho-pneumonia, were somewhat dry and anæmic. The tissues of the mediastinum were emphysematous, but the pericardium was free, and the air was found to have reached the surface by the usual route.—*Deutsche Medicinishe Wochenschrift.*

ALBUMINATURIA.

In a communication presented to the Société de Biologie, Gaube (*La Médecine Moderne*, 1881, No. 23) described as albuminaturia a condition characterized by the presence in the urine of a small quantity of albumin in association with carbonates, or especially with earthy phosphates. Albuminaturia may be physiological, pathological, or experimental. Physiological albuminaturia is transitory; it accompanies pregnancy; in both sexes it follows coitus; in the female it follows menstruation. Pathological albuminaturia is protracted in duration and of grave prognosis; it appears in the course of extensive suppuration, or associated with changes in the nervous system. Experimental albuminaturia is a result of the stomachal ingestion of an excess of phosphates soluble in the urine, of which the excess is eliminated as albumino-phosphates. Calcic albumino-phosphate, the most abundant in the urine during the existence of albuminaturia, is a combination of albumin with the bibasic calcium phosphate, and has a rotatory constant of —92°. The urine of albuminaturia is scanty; it contains but a small proportion of urea, of mineral matters, and of phosphoric acid; it is scarcely acid; filtered, not acidulated and heated, a precipitate of the bibasic calcium phosphate is thrown down, soluble by the addition of one or two drops of acetic acid; the solution of the precipitate is followed by a cloudiness of the urine, dependent upon precipitation of albumin, insoluble by heat or acids, but soluble in alkalies. Albuminaturia is distinguished from ordinary albuminuria or serumuria, in addition to other physico-chemical characteristics, by the preponderance in the urine of the mineral over the proteid matters; in serumuria proteids predominate over mineral constituents.—*Amer. Jour. Med. Sci.*

SURGERY.

SURGICAL TREATMENT OF GRANULAR CONJUNCTIVITIS.

M. Darier, in a paper on this subject, gives the operative details of the treatment of trachoma in Abadie's clinic:

1. Anæsthesia by chloroform or ether.
2. The conjunctival surface being thoroughly exposed, the granulations are scarified and emptied of their contents.
3. By means of a brush, and sometimes of a curette when the tissue is hardened, the morbid tissue is completely removed.

Very thorough and energetic lavage sublimate solution (1–500).—*Bulletin Général de Thérapeutique*, July 30, 1891, p. 80.

FOUR HUNDRED AND FIFTY SIMPLE EXTRACTIONS OF SENILE CATARACT.

Greef (*Knapp's Archives of Ophthalmology*, vol. xx., part 3.) reports these cases, all done at Sweigger's Public Hospital, which give, as regards losses and secondary cataracts, very similar results to a series of 371 cases done with iridectomy, showing there is no more risk in the simple operation. The method of asepsis is the following: on the evening before the operation the skin around the eye to be operated upon is well washed with ether, and then with a 1 in 5,000 watery solution of sublimate, after which the eye is closed by a pad of borated cotton wrung out of a sublimate solution, which is removed just before the operation, then the eye is again irrigated with the sublimate solution. The instruments are kept in a 4 per cent. solution of carbolic acid, but before use are dipped in boiling water. The dressing is kept in a Koch's steam sterilizer, and placed directly on the eye from this. Since the employment of these precautions not a single case of suppuration has occurred in his private clinic, but in his public clinic these cases still occur occasionally.

TREPHINING FOR CONVULSIONS.

To the St. Bartholomew's Hospital Reports for the last year Dr. Calvert and Dr. Berry have contributed a case of some interest. The patient was a child of nine years, who had been rendered unconscious by a fall which bruised her head in the left parietal region, in June, 1888. Consciousness was recovered in half an hour, and with the exception of a little giddiness her condition was quite normal. On the next day she seemed quite well, but early on the following morning she had a fit, and fits continued to recur frequently, but they were slight, unattended with loss of consciousness, and limited to the right leg. In August, 1888, the right upper limb began to be involved in the convulsions, and about a year after the accident the face as well was affected. Rarely, however, did the convulsion spread to the left side of the body. On admission in March, 1890, nothing abnormal was discovered in the head; the fits were frequent, as many as 172 occurring in twenty-four hours, but varying in severity. The spasm usually began in the right index finger, spreading to the arm and leg of the same side. After several trials with bromine, which could only stop the fits at the expense of greatly depressing the patient, it was resolved to trephine, first over the arm centre. Nothing abnormal was discovered, except an unusual tendency of the brain to bulge. A similar negative result followed the removal of a second disc of bone over the leg area. That the correct areas were exposed was verified by the application of a weak faradaic current. After the operation the patient continued to have slight seizures, but with less frequency. On these threatening to become again very frequent small doses of bromide were exhibited, and these were continued, three grains thrice daily being given, with the result that no depression was produced, and the fits were so much reduced in number that during the three months from July to October she had had only ten slight fits in all. Although the patient cannot be described as cured by the operation, there seems little reason to doubt that she was materially benefited—as much, perhaps, as was to be expected considering the lapse of time between the accident and the operation.—*Lancet.*

ANTISEPSIS OF THE URETHRA.

The experiments of Petit and Wasserman confirm anew the fact that even thorough and prolonged antiseptic irrigation of the urethra is incapable of producing perfect antisepsis of the canal. The authors made their investigations on eleven patients suffering from various urethral diseases (prostatic hypertrophy, stricture, gleet, cystitis, vesical tumors). After careful disinfection of the glands and external meatus, the urethra was irrigated for from twenty to thirty minutes with boiled water, four per cent. boric acid solution, and a 1 to 1000 solution of silver nitrate. From one to two litres of each fluid were used. Notwithstanding these measures, however, bacteriological examination of the urethral secretions before and after the irrigations showed no material difference as regards the variety and number of bacteria.—*Centralbl. f. Chirurg.* No. 44, 1891.

OPERATIVE TREATMENT OF A CYST OF THE PANCREAS.

Albert (*Wiener Medizin. Presse*, No. 43, 1891) recently presented to the Royal Society of Physicians of Vienna a man upon whom seventeen months previously he had operated for a tumor of the pancreas. Clinically, there was a tumor, as large as the uterus at the end of pregnancy, situated in the epigastrium and sending a process into

the pelvis, the percussion-dulness of which posteriorly was indistinguishable from that of the liver and which was taken for an echinococcus of the liver. As, however, the stomach could be detected anteriorly to the tumor, a diagnosis of tumor of the pancreas was made and operation advised. When the abdomen was opened by a median incision and the transverse fascia divided, no translucent membrane was found; so that to enter the free peritoneal cavity, a second incision was made in the right hypogastric region, the tumor reached and punctured. After the cyst was evacuated, it was drawn forward, and a portion that appeared to protrude from the foramen of Winslow was removed. It did not seem advisable to remove the entire tumor, on account of the high mortality (50 per cent.) of such operations. For some time after the operation, a saccharifying and peptonizing fluid was discharged through the wound, progressively diminishing in quantity. The case was the third of tumor of the pancreas operated on by Albert.

GALVANO TREATMENT OF ENLARGED PROSTATE.

Morotti (*British Medical Journal*, May, 1891) describes the method of Bottini in the treatment of enlarged prostate. The "incisor" apparatus is constructed like a small lithotrite in which the male blade has been substituted by a platinum wire loop. The female blade is hollow to allow the passage of two streams of water, by means of which the apparatus is cooled off. An accumulator battery is used with the instrument. Chloroform is only occasionally required. Unless the bladder is quite empty no water need be injected. The instrument is introduced into the bladder, its beak reversed so as to press against the enlarged prostate and the current turned on. When the sound of burning is distinctly heard the point should be gently moved backward and forward until the lobe is divided. Contact for one minute made a scar one centimetre thick, and for two minutes double the size. The instrument should be allowed to remain *in situ* for two or three minutes, so as to allow it to become cool before it is withdrawn. After the operation Nelaton's catheter may be used. Bottini has operated on fifty-seven cases with two deaths. In thirty-two cases a perfect cure was effected, in eleven there was improvement, and in twelve the results were nil. Operation is contraindicated when kidney disease is present or even suspected.—*Univ. Med. Mag.*

GYNÆCOLOGY.

THE EARLY DIAGNOSIS OF CARCINOMA UTERI.

G. Winter (*Berlin klin. Wochenschr.*, August 17th, 1891) draws attention to the great importance of diagnosing cancer of the uterus at an early stage, in view of the success that now attends the operation of total extirpation. Out of 474 such operations performed for cancer in Germany, only 40 (=8.4 per cent.) have been fatal, while since 1884, 64 supravaginal removals of the cervix have been performed in Berlin without a single death. The primary results thus attained are highly satisfactory. In regard to permanent recovery, our knowledge is not so accurate as might be desired; but there are the reasons for thinking that about 25 per cent. of women operated on remain in good health five years after the operation. In view of these facts it is lamentable that only 28 per cent.—that is, about one quarter—of the cases of uterine cancer are operated on, and if of this number only a quarter survive for five years, not more than about 7 per cent. of patients suffering from uterine cancer are permanently cured. The chief reason for this is that women do not apply for hospital treatment sufficiently early. Sometimes the medical man who is consulted in the first instance fails to examine, and consequently does not arrive at the diagnosis. In other cases the unwillingness or dread of the patient prevents her applying for relief sufficiently early for operation. In a few cases the symptoms are so slow and insidious in showing themselves that the disease has progressed too far for operation when they do so. If only medical men were fully alive to the importance of an early diagnosis, if they were more familiar with the first signs and symptoms, many patients who now apply for help when it is too late to operate would present themselves at an earlier stage, and consequently many more lives would be saved.—*Brit. Med. Jour.*

IS A PESSARY OR A TAMPON NATURALLY INDICATED AS A SUPPORT?

This question is the outcome of remarks made by Dr. G. Betton Massey, of Philadelphia, before the New York Obstetrical Society, in which he advocated the abandonment of pessaries. He believes their extensive use by the profession is based on an unnatural theory. It was in contradiction of nature to place a skeleton in a woman's

vagina. Nature never placed a skeleton there, and he could not conceive of our improving upon nature in that one point. Nor had he ever been able to trace any distinct advantage to the use of the tampon as a support. He had found that a woman at all sensitive objected to the irritation of the tampon. Practically he had been able to reduce his use of pessaries to bad and chronic cases of movable retroflexions and very bad cases of prolapsus, which were hopeless from any other method of treatment. He thinks we should get rid of the ultra-mechanical view when discussing the subject of displacements. What some others called displacement he has classed under the head of metritis or endometritis, or of inflammatory conditions, with displacements complicating or attending upon them. He regards displacements as secondary, and thinks the cases may be divided into two classes—first, displacements with movable uteri; second, displacements with fixed uteri.

The electrical treatment in these conditions would so frequently effect a cure that we had no need to resort to a pessary. That which is at the bottom of nearly all such conditions was metritis. That cured, the displacement would take care of itself, whether it was anteflexion, retroflexion, version or prolapsus. He has seen numerous instances in which the uterus had ascended and taken its proper place simply because the over size had been reduced by galvanic or faradic treatment.—*Practice.*

CONTRIBUTION TO THE STUDY OF OVULATION AND MENSTRUATION.

Cohnstein (*Deutsche Med. Woch.*) undertakes in this article to determine whether an artificial irritation of the ovaries is capable of producing the vaso-motor reflex necessary for menstruation, and also what role special conditions, as, for example, irritation of the external genitals, play in the causation of the menstrual flow. In his investigations he employed women whose ovaries could be easily palpated, the object of his investigations being to determine whether menstruation could be brought on by manual compression of the ovaries.

His results are as follows: (1) There exists a periodical and causal connection between the ovarian and the catamenial functions. The ovarian changes precede the uterine, and determine them. (2) If the ovarian activity is suspended, neither menstruation nor any of the accompanying changes in the uterus occur. (3) Ovarian activity may occur without menstruation, as, for instance, during lactation. The functional activity of an ovary can be inferred from its reaction to irritation. (4) Menstruation can be brought on before its regular time, but it is always preceded by changes in the ovary, induced, for example, by irritation from pressure. (5) The ovaries seem to alternate in the production of follicles ready to burst. (6) That Graafian follicles can ripen at any time is not proven, nor can menstrual bleeding or uterine changes occur at any given time in the intermenstrual period.

OBSTETRICS.

LEUKÆMIA AND PREGNANCY.

Dr. C. E. Laubenburg, of Oppeln (*Arch. f. Gynäk.*, vol. xl, pt. 3, 1891) relates a case where a woman died of œdema of the lungs forty hours, after giving birth to a macerated fœtus in the twentieth week of development. She was 32 years of age, and had been pregnant ten times. She had aborted on the last three occasions, and for six or seven years her health began to grow bad, always getting worse at each pregnancy. During her last gestation she had all the signs of leukæmia. She lost but little blood during the labor, which lasted over twelve hours, the breech presenting. The uterus contracted well after the expulsion of the fœtus, although the mother was comatose during the last three hours of labor, and rapidly grew worse afterwards. Great enlargement of the spleen was discovered after death. On the evidence of a large number of cases, Dr. Laubenburg concludes that leukæmia may directly originate in disturbances associated with pregnancy, delivery, or childbed. Leukæmia is liable to cause abortion. It always appears to grow worse during pregnancy. The prognosis of a case of leukæmia is especially bad if the patient becomes pregnant. As many cases grow progressively worse as pregnancy advances, it is sometimes justifiable to induce abortion or premature labor after due consideration of the relative dangers of the disease and the operation.—*Brit. Med. Jour.*

WHITE OF EGG FOR CRACKED NIPPLES.

Dr. Frank Van Allen, of India, in a letter to the *New York Medical Journal*, says he has found white of egg to be the best remedy for sore nipples he has ever tried. The

nipple should be painted several times a day. The albumin may best be applied just after nursing, while the nipple is still moist from the baby's mouth. As somewhat of a thick film is formed, it is well for the nipple to be moistened with a soft cloth dipped in water just before the baby is again put to the breast. The efficiency of the albumin is heightened by allowing it to dry on thoroughly before drawing the clothes again over the breast. This soothing albuminous covering forms a delicate film over the abraded nipple, and the surface is soon—within a few hours, except in severe cases—entirely healed.

TETANUS AFTER ABORTION: ALLEGED INFECTION FROM CASE OF TRISMUS NASCENTIUM.

Professor G. Henricius (*Centralbl. f. Gynäk.*, August 15, 1891) had under his care at the Helsinfors Lying-in Hospital last winter a woman, aged 25. She was admitted on January 9th, with marked symptoms of tetanus, risus sardonicus, trismus, spasm of the muscles at the back of the neck, and retracted abdominal parietes. She had been married for one year. She aborted at the second month in July, 1890. Her last period was in October, 1890. In the first week of January she aborted; on January 1st a physician had hastily examined her, and entrusted her thenceforward to a midwife. It transpired that on December 20th, 1890, the same physician was called in to a case of trismus nascentium in a child aged six days; its umbilicus had ulcerated. The same nurse who attended Dr. Henricius' case dressed the infant's wound. It died on the day that it was first seen, December 20th. This nurse took charge of the case of abortion, and detected the ovum distending the os on January 3rd and 4th. On January 5th she was absent, and the ovum apparently came away. On the morning of January 8th the patient's lower jaw became stiff, the other symptoms of tetanus developed, and the case was sent into the hospital on the next day. The patient rapidly became worse. Chloroform inhalations, subcutaneous injections of morphine, etc., gave temporary relief. On January 10th an attempt was made to explore the uterus thoroughly; it succeeded, but no trace of the ovum was found, though some membrane came away. Nutrient enemata and chloral injections were given, but œdema of the lungs set in. The patient died on January 11th; the temperature was then 39.6° C.; it rose as high as 40.2° C. within three-quarters of an hour after death. The brain and cord were freely speckled with hæmorrhagic foci, the grey matter of the cord being of an almost uniform chocolate color. A polypus was found in the uterine cavity; it contained traces of decidua and chorionic villi. Professor Henricius concludes that "in all probability the tetanic virus was transferred from the child to the woman."—*Brit. Med. Jour.*

PÆDIATRICS.

TREATMENT OF DIPHTHERIA BY ICE.

Sevestre (*Soc. Med. des Hospitaux, Jan.*, 1891; *Revue Obstét. et Gynécology*), reports in behalf of a committee that diphtheria may be treated by the use of ice alone. Small pieces are inserted into the mouth of the child every ten minutes, day and night. This can be done without annoying the child, even though it be sleeping. The ice should be continued for some time after the membrane has disappeared. Sevestre does not recommend, however, that this be the sole treatment, but that it may be made a powerful adjuvant to the ordinary antiseptic medication of diphtheria.

PUNCTURE IN CHRONIC HYDROCEPHALUS.

Karnitzky (*Arch. für Ped.*, August and October, 1891) reports five cases of chronic hydrocephalus treated by puncture. In none of the cases did any complication follow the operation, which was performed with aseptic instruments. In two cases the child died; in one the head was tapped twice, in the other five times; in the latter death was due to diarrhœa, and considerable improvement followed the first tapping. In another case, tapped five times, the child was growing rapidly worse when last seen; one case was only under observation five days; in the fifth case—a female child, 11 months old, with a very large head, with extremely thin bones—six punctures were made during the course of a month; the circumference of the head was reduced from 70 to 62 centimetres, and when at the end of this time the child ceased to be brought for treatment, it appeared to be doing well.—*Brit. Med. Jour.*

SIMPLE TREATMENT OF RANULA.

The *Lancet* states that Dr. B. Hernandez Briz, of the General hospital, Madrid, writ-

ing in *La Andalucia Médica* on ranula in children, mentions a case of one of these tumors which was as large as a hen's egg, and which he cured in a very simple way. Intending to empty it, he inserted a needle of common hypodermic syringe into it in order to employ aspiration. The contents were, however, evidently too thick to come through such a fine tube. He then filled the syringe with a mixture of 10 parts each of tincture of iodine and water, with one part of iodide of potassium, and injected 15 min. of this mixture. Three days later the tumor was decidedly smaller. A second similar injection was given, and when the child was next seen, three days afterward, the ranula had almost disappeared. Several months have now elapsed, and there is no sign of the return of the tumor.

A CURE OF SANTONIN-POISONING.

J. A. Smith (*British Medical Journal*, June 6, 1891,) gives the case of a girl, three and a half years old, who had taken three grains of santonin in one dose. She had vomited once. There was no diarrhœa, no prostration, no rash; the pupils were slightly dilated, the temperature normal, the pulse 80. There was no true delirium, the chief symptom being the apparent change in the color of all objects, mostly to green. White appeared yellow, red and blue were changed to green. No object appeared its proper color. The urine was an intense saffron color. The symptoms disappeared after twelve hours.

HYGIENE.

WASH FRUITS BEFORE EATING THEM.

The following curious instance is reported in a French journal by M. Schnirer of the ease with which tubercle bacilli may be disseminated. While at work one day in the laboratory of Weichselbaum he sent for some grapes to refresh himself with. The fruit had been kept up for some time in a basket outside the laboratory, and was covered thickly with dust, so that the water in which it was washed was absolutely black. On examining the water he reflected that, inasmuch as the neighboring street was traversed frequently by consumptive patients going to the clinic, the dust probably contained the desiccated sputa of these patients, charged with tubercle bacilli. To settle this point M. Schnirer injected into three guinea pigs 10 cub. centim. of the water in which the grapes had been washed. One animal died in two days from peritonitis, the two others died on the forty-eighth and fifty-eighth days respectively, presenting marked tuberculous lesions, especially at the place of injection. The water in which the grapes had been washed was taken directly from the faucet, and the glass containing it had been sterilized; neither the boy who had brought the grapes, nor the merchant who had sold them, was tuberculous. Hence the cause of infection was beyond doubt the dust on the grapes. This experiment illustrates the danger arising from the dissemination of desiccated tuberculous sputa in the air. The conclusion is obvious: Wash grapes before they are eaten.—*Jour. State Med. Soc., of Arkansas.*

VACCINE MATERIAL FORMED BY STAPHYLOCOCCUS PYOGENES.

In a communication presented to the Académie des Sciences of Paris on October 5th, 1891, A. Rodet and J. Courmont (*Revue Scient.*, October 17th, 1891) give the following conclusions based on a series of experiments carried out by them with the staphylococcus pyogenes. Certain pathogenic microbes are able to produce simultaneously, in the same culture medium, both vaccine substances and predisposing substances, which, however, are perfectly distinct. The staphylococcus pyogenes is one of these in question. The vaccine material formed by this organism is precipitated by alcohol, whilst the predisposing substance is soluble in alcohol. In filtered cultures the action of the vaccine material is completely masked by the effect of the predisposing material. On heating for twenty-four hours to 55° C., however, this vaccine substance makes its appearance, so that it is possible that one may have to look for a vaccine from the soluble products of a pathogenic microbe which may not be formed under normal conditions, but which may be artificially forced.—*Brit. Med. Jour.*

MEDICAL CHEMISTRY.

DETECTION OF TRACES OF COPPER IN DISTILLED WATER.

According to H. Thoms, distilled water often contains traces of copper which escape detection by the usual reagents, such as ammonia or potassium ferrocyanide.

Such traces may be detected by dissolving in the water some potassium iodide. The water will acquire a yellowish color if only

1 part of copper in 200,000 parts is present. Of course, the water must contain no other substance capable of decomposing the iodide or liberating iodine.—After *Pharm. Centralh.*

NEWS AND MISCELLANY.

JOULE'S LAW DEMONSTRATED.

An experimental demonstration of Joule's law has been furnished by Professor Robert Spice, of Brooklyn. The method employed is to send a current through a known resistance, immersed in a known quantity of liquid, and also to immerse in the same liquid one set of junctions of a small thermo battery connected with a galvanometer. The other set of junctions are immersed in another vessel in a known volume of the same liquid, in which is another known resistance. If both quantities of liquid are heated by the current to the same temperature, the galvanometer will remain at zero, but not otherwise. The results of the experiments show that the rise of temperature of the liquids is proportional to the electrical energy expended.

SHALL DOCTORS DISPENSE THEIR OWN MEDICINES?

Slowly, but surely, the time seems drawing near when doctors will dispense their own drugs, and not run the risk of substitution, adulteration or repetition at the apothecary's shop.

The New York *Medical Journal*, of June 13, 1891, contains a letter on this subject written by Dr. A. W. Herzog, of Hoboken, N. J. He says: "If the druggist would content himself with the compounding of medicines according to physician's prescriptions, it would be useless to argue this question, as it would be more handy and time-saving for the physician to prescribe than to dispense. But it is different; not only does the druggist dispense the doctor's prescriptions, but he sells patent medicines and does counter prescribing as well."

He then takes the case of a young doctor just starting out, and gives his experience, which will be recognized as truthful by all who have started in large towns or cities in the last decade. How all the druggists in the neighborhood send nicely printed pads of prescription blanks with their trade mark on the back. "Have this put up at Blank's pharmacy." How they send a patient to the doctor when they can't sell a bottle of patent medicine or put up something themselves. How this state of affairs continues till some other doctor comes into the vicinity, when the same course is gone through with him also. How "all the doctors in the neighborhood will notice that their prescriptions not only get repeated for the same patient, but even for patients that they never saw. They will find that even the words *non repete* written at the top of the prescription will not remedy the evil."

Doctor Herzog closes his communication in the following words:

"As I said before, if the druggist would do no more or less than dispense our prescriptions, we doctors could and would be satisfied; but as it is now, when the druggist will not only sell and recommend patent medicines, distribute almanacs recommending the use of the same, sell his own rheumatic and gout cure, his own cough medicine; prescription No. 77,777, which will surely cure hæmorrhoids, and give all sorts of syrups and other things over the counter, not only when people ask for them, but also when they ask what is good for this or that; when they will stanch bleeding wounds, and use the stethoscope, and do other things utterly outside of their domain; when they will persuade patients to change doctors, sometimes by telling them so outright, sometimes by remarking that it is wonderful that just at present so many patients die on that doctor's hands, or by making some other remark of this kind. And then the question is laid before us: Shall doctors dispense their own medicine?"

The same journal in its issue of August 22nd, 1891, contains another letter on this subject from Dr. J. A. Wessinger, of Howell, Mich., who answers the question in the affirmative, and says further:

"Dispensing one's own medicine is a sure protection against the cupidity and (often) incompetence of the druggist. I am free to say that all druggists are not alike in this matter, but from personal experience I *know* some of them do practice the grossest violation of honor in the case of a physician's prescription. During the past three years I have dispensed my own medicines, and shall continue to do so."—*The Alkaloid.*

Hypnotism and crime seem to be becoming closely united, as in at least a dozen recent criminal cases the defendants have claimed to have acted under hypnotic influence.

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Medical and surgical reporter
(Philadelphia)

GERSTS

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